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**EARLY ROCK ART AND ETHNOGRAPHIC
ANALOGY IN INDIA**

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SCANNED

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Preface

Man is characterized by a number of special features. Quite a number of them are biological attributes. These characteristics have significant role in development of culture. In fact, the basic foundation of culture is laid on biology of man. In a way, both biology and also culture are integrated in nature. These are also provided with their respective principles and activities. Above all, there are a good deal of interactions between and among these characters which gave rise to the net product of ideas and operation. This fundamental issue may be explained from the point of view of art. The basic perception of art, comprising a number of facets like composition, layout, dimension, colour-effect etc. are initially conceived in the brain. If hypothetically it is thought of that only brain was developed and other body parts or organs as eyes and forelimbs would not have been developed in the hominid stage, art would never emerged. Human vision is characterized by stereoscopy, acuity and capacity for colour differentiation. The forelimbs of man are biomechanically developed, with special power and precision grips. The coordinated activities with involvement of brain, vision and the power-precision grip in the palm have given rise to perception, conception, operation and production of art.

Art is also considered to be a special characteristic feature of the hominid which slowly but in continuity emerged at a later stage. This is considered to be explanation of the fact - why art

is devoid of during the stage of Homo habilis/erectus. At a later stage, in the biochronological sequence, Homo sapiens came into existence through the process of evolution. Within the first group or the earliest sub-species namely Homo sapiens neanderthalensis, art was in vogue in a nascent state. Immediately after, with the outset of Homo sapiens sapiens, art gradually turned fullfledged. This is evident primarily with confirmation from the pieces of "art mobilier". The dating of art with the above noted materials is both genuine and convincing. Simultaneously, in a processual form, art was found to be depicted on rock in the form of paintings, engravings and even sculptures. There are other evidences, as painted pebbles on which art was created.

Art was initially produced during the prehistoric times, specially in the later phase of Palaeolithic period. Since then it is found to be continued with accelerated development, specially with regards to form, motif, style etc. Like many other spectacular discoveries, prehistoric art was found out by sheer accident and this initiated the study on rock art.

About rock art of prehistoric/ancient period, many a features, traits and characters are known. But there is hardly any direct way to know the function, except logical guess or rational speculations and at times reconstruction, corroborated with data. However, drawing pertinent ethnographic analogy is not outside the scope to work out. Application of this method is appropriate for better understanding of rock art of earlier times. With a view to working along this line, attempts have been made to draw parallels from the tribal context in which art has a special role. Under any circums-

tance, it is neither proposed nor confirmed that this analogy points to a clearcut equation, rather some amount of deviation can seldom be ruled out.

In India, study on rock art has a considerable antiquity. In the beginning, the results were on discovery - this is quite common to begin with. After the discovery of quite a number of sites and even localities, new ideas on identification of motif, stylistic pattern, occurrence of forms in numerical expression gradually crept in. As a matter of fact, study on rock art acquired a footing as a subject than a discipline. However, the functional implication of prehistoric (?) rock art was not properly known.

India is one of the few large countries where the tribal groups are still in existence. These tribal groups are classified in different forms and ways in terms of distribution, language, ethnic elements, cultural milieu, economic pursuits etc. Many of these tribal groups have their own art forms, depicted in different ways as paintings, engraving, wood carving etc. The tribal groups, engaged in paintings even engravings are very useful to study for the purpose of drawing analogous connections and homotaxial relationships. It is not merely the technology of production of art is known from them but above all the functional implications of art of those groups can readily be known.

In the realm of tribal art, which is also termed as 'ethnographic art', anthropological background, training and methods are absolutely essential. As a student of anthropology and through my

experiences on the study of tribal art and application of ethnographic parallels in understanding rock art, it is convincing that the present work has surpassed the similar works so far carried out in India. I also feel that in (near) future the present scheme will further be modified, giving rise to development by myself and obviously by other workers.

In this prefatorial note, it deserved mentioning that the coverage and canvas of the work turned to be enormous. For the purpose of proper comprehension and completion, within the target schedule, certain restrictions have been imposed. The primary foci are drawn on rock art, tribal art and an integration of both the components. There is a well extended scope to carry out the work in furtherance. Within the limited time frame and managable situation, a considerable quantum of data along with analyses have not been included. A well-knit measure for selection has been made which helps in comprehension and conclusion. It is expected, both with sincerity and confidence, that in future additional data and results will be put forward to the interested scholars of national and international levels as inputs and their feedback will be helpful for the work in continuity.

The present study is more regional one than the consideration in the global perspective. The reason is not only simple but also rational. Instead of making the work unnecessary complicated, the unidirectional approach has not been distorted. It is more important to know about India at least to begin with. Thereafter comparison may be made for drawing similarities and dissimilarities with other areas, distance and proximal, both of rock art and ethnographic art.

For the present project financial support has been extended from the University Grants Commission, under the minor research grant scheme for the university and college teachers. I acknowledge financial and technical support in some way or other received from Lalit Kala Academy (New Delhi), India; Centro Camuno di Studi Preistorici, Italy and University of Michigan, U.S.A. towards all success of this ambitious and expensive project. I am also indebted to the United States Educational Foundation in India for awarding Fulbright Fellowship and research grant which facilitated further work on comparative assessment between rock art and tribal art of Old World and New World. I acknowledge the active help received from Professor Eleanor Manikka and Dr. Walter Spink of Department of Art History, Dr. Carla Sinapoli of Department of Anthropology in the Michigan University - Ann Arbor, U.S.A. Cooperation and suggestions have also been received from Dr. Carol Patterson Rudolph, Dr. Mark Kenoyer of Department of Anthropology, University of Wisconsin - Madison; Professor Gregory Possehl of the University of Pennsylvania, Philadelphia, U.S.A., Professor Emmanuel Anati of the Centro Camuno di Studi Preistorici, Italy and Dr. Robert G. Bednarik, Secretary of the International Federation of the Rock Art Organisations, Australia.

Since 1973, when I was a student of undergraduate honours class in Anthropology, Calcutta University. I got interested in exploring the rock art sites. From the initial stage, such activities were encouraged and overwhelmingly supported by my professor, guru as well as the guide of this present dissertation work - Professor Asok K. Ghosh of the Department of Anthropology, Calcutta University, who is now involved in this area of research. This project is an outcome

of his tremendous amount of interest in studying cultural continuum. During fieldwork for the present work, cooperation and assistance were rendered by Sri Shankar Singh Thakur of Pachmarhi who is a local tourist-guide. In Orissa, all kind of assistance has been given by my friend Sri Vivek Bej and Studio Sun Beam, Keonjhar. My students including Shri Subrata Paul, Shri Susanta Jana, Sri Snehasis Chatterjee, Sri Khagendranath Das and Miss Chhanda Biswas assisted me during field survey and thereafter.

A special mention may be made that throughout this present project all kind of cooperation received from Dr. P. G. Chatterjee of the Department of Botany, University of Calcutta; Professor B. N. Banerjee of the Department of Anthropology, Professor Amrita Ray of the Department of Archaeology, Calcutta University and Uma Dasgupta, Director of the United States Educational Foundation in India, Eastern India Regional office at Calcutta. Sri A. Kandar, Sri Sudin Acharjee, Sri Dilip K. Chakraborty, Smt. Subhra Bhattacharya have also helped during preparation of this manuscript.

It would be my privilege to acknowledge all gratitude to my wife Minati who encouraged me most actively in completion of this work. Mention may be made that my only son R a j a, being exposed to this work - both in the field and lab. has tuned himself with art, neither rock art nor tribal art, but art work on paper. Many of his drawings have some commonness with the art work under study. I feel happy for this of his interest.

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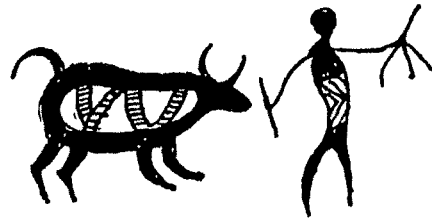
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INTRODUCTION



ROCK ART IN ANTHROPOLOGICAL DIMENSION

Unlike many a disciplines, the beginning of anthropology is relatively later. Prior to emergence of anthropology as a distinct discipline, history, art, philosophy etc. were in vogue in a more or less stabilized form. On the other hand, sociology, art history, communication etc. which have bearings with art, appeared in recent times. It may be viewed that as a discipline, anthropology was nourished to a great extent by many a subjects which were already in existence. In due course anthropology also started catering needs to other subjects. However, anthropology did not turn stalemate. Instead, the process of development set in different ways, i.e. spontaneously and also with punctuations. It is needless to mention that in convergent dynamics of different subjects, the independent role and functioning in isolation have almost been ceased, and anthropology is no exception from such norm. There is cohesive relation between anthropology and art and that too is evident from the contributions made by a number of stalwart scholars (Firth, 1951, 1992; Boas, 1955; Mead, 1963; Levi-Strauss, 1967).

The initiation made by earlier workers did not stop, rather the continuity went on and is still being present with appreciable acceleration. In dealing with art and anthropology, in a conjunctive manner, there are a number of causal relationships. For all practical purposes, any form of art is created by man, instead of natural. In fact, art is created for various functionary purposes and for diverse needs faced by man. Under the circumstance, it is not out of place to mention that art may be viewed as an indispensable part or a trait of total culture complex. It is made by man for various purposes, with the inclusion of decorative elements, aesthetics, communication, religious activities and so on. As a matter of fact, the relationship between art and anthropology is always in existence.

To begin with, art, as a product of human endeavours, may be accounted for in terms of need, technology, function etc. in the main. There are also other issues as materials and their availability for creating art, environment in which the artist is brought up and living and so also the art is created. For all kind of considerations, art is found to prevail in the dimensions of both space and time. On the basis of the above noted factors, the genesis, spread and/or diffusion, development, change etc. may be examined from anthropological perspectives. In other words, the treatment of this kind may be termed as the anthropological foundation of art. It is somewhat difficult to study art without anthropology. For studying anthropology, art may not always be quite appropriate.

There is another close linkage between art and anthropology. It is not only thought of but with the corroboration of relevant data. The earliest form of art has been dated to Upper Pleistocene/ Upper Palaeolithic period - if not earlier, and it is dated about twenty-two thousand years B.P. in accordance with geological, cultural and absolute chronological parameters respectively.

In the same set, it is deduced that art in fullfledged form made its appearance during the time of earliest Homo sapiens sapiens. In course of biological evolution, multifarious mode of evolution has taken place in man. In this regard the major components are brain, forelimbs with special grips both precision and power, acuity in vision with regard to stereoscopic and colour-specific etc. This is practically an almost unexplored area for studying the genesis of art and its association with early hominids. It is still an open question as this arena has not been touched upon which will assist to understand the biological capabilities for the creation of exquisite Upper Palaeolithic art. In the same premise, the involvement of different sub-disciplines of anthropology as biological anthropology, cultural anthropology and palaeoanthropology are to be activated for appropriate integration. It is hoped that the concerned experts and scholars will expedite their researches in the above-noted projects and thereby a number of problems are expected to be clarified and solved.

Anthropologists, practically a score of them have carried out intensive researches among small primitive groups, specially the tribals. By now, there are surfeit of data and information on

various aspects of primitive art or tribal art. At times the coverage is of a period of about a century, and even more in certain instances. Not always within the arena of anthropology, but rock art of earlier times both prehistoric and ancient has also been studied. A critical review of the same perspective has been included here in appropriate context, keeping the primary focus on India.

The above discussion is a comprehensive but brief account in understanding the relationship between art and anthropology. It deserves to be mentioned that in majority of the cases, the treatment is made either on rock art or tribal art. The instances are very few in which the continuity from prehistoric to modern primitive dimension of art has been attempted to identify the continuum. In view of the same, the present project has been taken as an endeavour for compensation.

SOME COMMENTS OF RELEVANCE

At this juncture, it is perhaps essential to include a few comments which are of utmost relevance. Almost all the people from the discipline or sub-disciplines, as the case may be, on rock art and/or tribal art, perhaps seldom understand the relationship between art and anthropology. This is incredibly conspicuous in India. It is a great pity that many of the artists, and even art lovers, are quite famous for their respective contributions in art and a great part of them is included within the group of intelligentsia. There are some artists who are engaged even on folk art, a proximal annexure of the forementioned area. In spite of the fact,

they are practically cipher in ethnography or rural society, and anthropology is placed at a reasonable distance from them. The other aspect is equally dismal. Anthropologists, more specifically of the streams of social and cultural anthropology do not practically have any exposition or experience with art in general and ethnological art in particular (Haselberger, 1961). Naturally, they are placed too far from art in its overall form. This view turns to be contradictory and even upsets the equilibrium. Many renowned social anthropologists (Redfield, 1941; Elwin, 1951; 1955; Firth, 1951, 1992; Boas, 1955; Nodelman, 1970; Adams, 1973; Bateson, 1973; Fagg, 1973; Layton, 1991) have carried out intensive works on ethnological art. The term "ethnological art" as a substitute of primitive or tribal art has been adapted following the coinage of terminology made by Haselberger (1961).

Most of the forementioned workers have included the motifs, styles, technology, function etc. in their treatment and exercise on art forms, features and functions. At the same time, in their endeavour to reconstruct the society, encompassing economy, culture, polity and religion have never been set aside. In a way, the ethnological art represents the society with its multi-dimensional facets. At the same time, this overall methodology may be modified to some extent and thereby the art objects can be used as markers of social, cultural, economic and religious attributes. The works of this kind, both in Europe and USA are quite marked and the importance of the same has been accentuated to a great extent because many of such works have been carried out by a number of well established

anthropologists. Without taking all of them, in a very restricted manner, some names may be mentioned. These are Haddon (1895), Raymond Firth (1951, 1973), Levi Strauss (1963), Mead (1963) etc. Their tradition in the area of anthropology of art has been taken up by the scholars of the succeeding generation and among them some of the noteworthy scholars are Haselberger (1961), Fischer (1961), Ucko (1977), etc.

BACKDROP - AN OVERVIEW

There are both complications and contradictions on various aspects, as of the proper perspective of the problem, the proper scanning of the topic, methodology and technique, process of analysis and system of interpretations. All these issues are so numerous without such commonality. It may be apprehended that there is good deal of dearth in process of standardization. If these issues are to be dealt with in comprehensive and even in brief form, it will turn to be a ceaseless exercise and perhaps will give rise to an unending attempt. Despite this, these points have not been totally isolated. On the contrary, the important, relevant and pertinent points have been included. The arrangement of this type has turned to be compulsive, otherwise it is not only difficult but practically impossible to complete the present work.

The present study is not pointed to theoretical discussion with critical remarks, both of thesis and antithesis. The work which has been taken to carry out is concerned with a temporal universe stressing the chronological perspectives. Within the same

fold, necessary type and sufficient quantum of data have been incorporated. There are different geographical regions of study and the chronological positions are also dissimilar. One part is relatively ancient, concerned with rock art. The other part is concerned with ethnological art, specially the art of a number of tribal groups. The two primary sets are placed on two points in the chronological scale. At the same time, there are some similarities in form and motifs together with style of the art objects between the sets. In view of the same an attempt has been made to search for linkage of art, both in performing activities and ideological aspects. The trend of continuity may or may not be present. Naturally, the hypothesis has been kept open. The data will indicate both the feasibility and practicability of the hypothesis. Accordingly, corrections are to be made. The problem, the area, the art, the environment and many such aspects are indeed new. Considering the positive points instead of examining the theory, the practical parts have been properly identified, worked out and discussed.

In the present context, it is necessary to point out that this work is provided with an anthropological bearing, but not the bias. This is quite obvious because the author is within the fold of anthropology as a discipline for more than two decades. His expositions and interactions with other anthropologists have enlarged his vision both of thought process and operation. As a matter of fact, his observations and synthesis on the problem of art, both of rock art and ethnological art is turned with anthropology. The form,

style and motifs of art are no less important. But above all, the culture, society, organization and institution of those art makers and viewers are no less important. In case of ethnological art, it is to be understood in its totality and the overall form and function of the society. In such condition, the impact, influence and the correlation, if any, between the two sets can be drawn. Conversely, with rock art the art is only visualized while the other aspects are not known in practical sense. In the same equation attempt has only been made to decipher the unknown or least known past.

ALLIED AND RELATED CONCEPTS

The relationship between the structural principles and preferences existing in the society and its manifestation of art has also been established in the study made by Adams (1973). She has critically examined the compositional principles existing in the decorative textiles of east Sumba - a small island of Bali, Indonesia. The decorative designs of men's dress or textile show the presence of motifs or designs which are identical but placed in opposite direction to each other and such arrangements are repeatative in nature in horizontal bands. According to Adams' observation on the arrangement pattern of mirror like images, the composition and its principle is same as it is manifested in the organization of villages, similar dyadic-triadic relationship prevailing in the marriage system as well as the norm of gift exchange etc. within the community concerned. The mirror like image which is essentially represented in their art is perhaps much influenced by traditional preferences and thought

pattern common to the society through generations. The concept and principle of mirror image is also reflected in their idea of supernatural ordering and in their ceremonial language. In the society the favoured and auspicious number is two, four or two times - eight. This also plays among the group members in the unconscious level. Over and above, through such direct field studies Adams has established her own hypothesis that art has direct influences on the intellectual systems that are traditionally maintained within a particular ethnic group.

Mead (1963) had contributed only briefly in the domain of anthropology of art. She had analysed the bark paintings of the mountain Arapesh of New Guinea and has shown that traditional art is found among different linguistic groups and tribal societies. These may be classified into cultures, containing distinctive styles. It is evident from her data that the designed elements : as commonly depicted on the bark paintings are stylistically almost identical to the stick figures which are represented in the children's scriblings of the same society. Mead has shown her special interest in recording the process of painting including the preparation of the bark canvas. The majority of motifs represented in their art are conventional elements, simplistic and therefore referred as 'stylized'. Mead finally observed that the interpretations made by the painters are inconsistent and the same figure is identified differently by different artists and sometimes by the same artist with reasonable time gap. Thus, the symbolic diversity of the painting point out its changing interpretation in both spatio-temporal level.

Designed elements emerge from the naturalistic representations and ideas [] are mostly abbreviated in more schematic form with the application of colour.

Fischer (1961) had proposed a hypothesis relating art styles and socio-cultural conditions. This proposition had been substantiated by objective statistical tests and incorporating data of Barry's (1957) study in psychology of child art and Murdock's (1957) "World ethnographic sample". A number of hypothetical polar contrasts, available in the art styles of different communities under study, have been deduced. It is revealed from the Fischer's hypothesis that certain socio-cultural conditions and functions act as determinants for studying the style of art. The first hypothesis expresses that the art available within an egalitarian tribal society has an association with visual repetition of same element. In other words, in egalitarian societies, figures or motifs become more conventional or idealized, following the artist's intimate experience in group harmony and own involvement in non-hierarchical society. On the contrary, the varied design elements are represented in the art of hierarchical societies.

In the second hypothesis Fischer (1961) had associated the preponderance of maximum empty space with egalitarian societies, whereas the empty space is minimum in the art style present in the hierarchical societies. Postulations have been made in furtherance that the egalitarian societies are more scared about invasion by strangers. They maintain their identity by isolating themselves

from other communities and so the inherent idea of isolation is motivated through symbolic creation of enough empty space in the panel as conceived by an artist.

The third hypothesis reveals that the art style of the egalitarian societies are more symmetrical as opposed to the fact that asymmetry is more common to the art of hierarchical societies. The fourth hypothesis points out the preponderance of enclosed figures in the hierarchical societies. Such boundaries are absent in the egalitarian societies. The social stratification or ranking prevails in hierarchical societies influence in the socio-psychological view point of the artist and consciously or unconsciously the idea is reflected in their art.

Beside the four above mentioned major hypothesis, Fisher had also connected the art style to the social organization. Accordingly, the proposition has been made to designate the straight lines, representing the male form, as opposed to curved ones. On the contrary, complex, non-repetitive design, representing a hierarchical society, should be associated with societies which strongly favour male solidarity in residence (Fischer, 1961 : 84).

Fischer's hypothesis (1961) of course needs further empirical verification. Its proper assessment in practical situation, substantiated with appropriate data, may be established. A useful model for possible interpretation of rock art and reconstruction of the concerned society can be made with the aid of similar archaeological materials of unknown past.

In recent times a significant attempt in decoding the rock art imagery has been attempted by Olsen (1985). In the study on Hovenweep rock art of Rocky mountain area in north America she had statistically compared the basic stylistic and thematic elements available between the rock art of Hovenweep area near Mesa Verde National Park of Utah state and the traditional art of several numerically dominated American Indian communities of the same region. The study has further traced the genesis, developmental pattern of art elements and chrono-cultural relationship between the art traditions of Hopi, Zuni and Pueblo Indian communities. In native American reserves or territories in Rocky mountain area, the evidence of art either in the form of material culture, pictographs on rock surface have a continuity from prehistoric to modern time. Plenty of relics of art either on pottery or otherwise have been discovered in prehistoric and other archaeological sites. In addition, plenty of rock art materials are available from the prehistoric rock shelters and other habitational areas. It is a general trend among the researchers in the field of rock art study in America, to identify and relate rock art with cultural tradition of the present native American groups. Thus the concept of continuity of art tradition from prehistoric period to present day tribal communities is very much in existence in this part of the continent.

Olsen (1985) had analysed the petroglyph and pictographs as a system of visual communications and also observed that initially the rock surfaces had been utilized as a medium to document information about economic ownership, ceremonial ritual, events, status

or oral traditions which in due course gradually lost proper significance. "More information than ownership or identity was included in the prehistoric rock art, such as seasonal information, religious significance or both" (Olsen, 1985 : 134).

It is also revealed from the same study that a significant number of design-elements of rock art are identical to different clan symbols of particular native American groups inhabiting in the same area. Olsen has also discarded the possibility of purposive attempt for sympathetic magic behind the hunting scenes. By making statistical correlations, it has been established that the prehistoric rock art of Anasazi Indian communities have gradually modified and the contemporary Hopi and Zuni art traditions have developed from the Anasazi ancestral tradition. By comparing the prehistoric and living visual communication systems and analysis of the graphic elements with semiotic relationships between parallel cultural traditions, certain similarities have been identified which may ascertain the cultural history of the concerned tribal groups.

MORE ON THOUGHTS AND THEORIES

Intensive study has been carried out on oceanic art, especially among Tikopia, Maori and other Polynesian indigenous communities (Firth, 1925, 1936, 1960, 1973; 1992). This topical area of study is primarily empirical in type but leads to the hypothesis on structural and functional role of art among primitive or pre-industrial, egalitarian societies. He (Firth, 1992) has also critically estimated the role of anthropologists in studying art and scope for understanding the significance of art in the society. He put forward

the process of conditioning and emergence of an artist in a society along with his perceptions, including intellectual and emotional experiences for communication of ideas. These are major areas for anthropological studies. According to Firth's critical estimation "anthropologists have looked upon art in many different ways. Redfield (1959) ... saw art as an enlargement of experience" ... through which one sees interesting human affairs" (Firth, 1992 : 16). Redfield separated modern non-objective art from its primitive and early ancestral stock. The viewer of the modern art understands its aesthetic meanings through his own interpretation and experience. Firth's assessment about his own position in the anthropological studies of art is less imagery than Redfield (1959) and put less stress on code or message than Bateson's (1973) idea which is viewed as a "part of the result of attributing meaningful pattern to experience or imagined experience" (Firth, 1992 : 16).

Firth (1951) brought forth three basic propositions for understanding primitive art. These are :

- i. The resultant work represented by an artist in a primitive society project his personality structure sharing uncertainty and other emerging tensions commonly persisting in the society.
- ii. The personality structure of the artist is a resultant of his experience and relevant as aesthetic creativity in imagery of art.

- iii. In primitive art, the artist's own perception is dominated by social conditions, forces and prevailing normative behaviour in communicating ideas.

Following Firth's concept it may further be stated that the tribal (or primitive) art and prehistoric or early rock art have some basic common elements. A distinction between the art and information has also been proposed. Accordingly, art is a form of aesthetics "for the sensuous pleasure of form, line and colour" (Haddon, 1895 : 4). This view-point points to art for art's sake. The pictorial sign-language that conveys non-verbal type of information has been considered as of discrete form of culture. However, the role of supernatural belief, power and authority on art practices can not be ignored. His hypothesis states that art in its initial or incipient stage is more realistic in nature and solitary decorative figures are predominant in this level. In the evolutionary sequence, the art forms including independent pictures, groups or compositions, series of patterns and combinations or heteromorphs emerge from the basic form of solitary or individual realistic figures. In the final stage, i.e. in the decaying stage, the pictorial art is gradually degenerated through incompetent copying, while the group of figurative compositions are gradually transformed into conventional treatment for decorative purposes. The series of patterned figures in due course turns more simplified through the process of repeated performance of copying" (Haddon, 1895 : 8).

It has also been apprehended that the art of the primitive communities are directly conditioned by the environment, even the artistic skill is dependent on it. It has also thought of that the

surplus economy of any community provides favourable impetus for suitable growth and maintenance of artistic traditions.

Franz Boas's (1955) contribution in linking art and anthropology has turned significant in his study on 'primitive art'. He has compared the art materials available in different tribal societies of Australia, New Guinea, American Indians along with similar elements from tribal Africa, Oceania and some other regions. The graphic and plastic arts of the aboriginal communities, distributed in different parts of the world have been analysed on the basis of formal element in art, keeping in view on symbolic aspects and style. He hypothesized that the art in the tribal society has made possible for two sources of origin. These are : technical pursuits and the expression of emotions and thoughts. The other observations that he included in his book are as follows :

Boas came forward to discard the earlier anthropological theory on art that supported the idea of emergence of geometric figures from the naturalistic phenomenon. He proclaimed that the borrowed motifs which are not part of the tradition of particular type may in due course be transformed gradually resulting more symplified, abstract or rather decorative motifs and designs. Again, the motifs may be common to a number of groups but the significance varies to a great extent. Similarly variations are also met with in different geographical areas. He further commented that the naturalistic figures signify the communicative role of art whereas the implication of the conventionalised forms and other geometrical representations are principally decorative in nature. He has also pointed

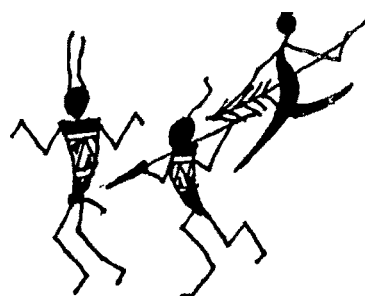
out the origin of the technical dichotomy in the production of art which is due to gender differentiation. The art process as well as the perception of the artist are sometimes dependent on the sexual differentiation of the artist.

EPILOGUE

Besides the forenoted concepts, emerged through works, other sub-concepts have also brought in. All the concepts can seldom be accommodated in the layout of the present work. There are some which are neither proximal nor relevant with the present work. Moreso, a fulllength exercise only on concepts may hamper the real perspective of the present work.

In the conventional or usual form, brief discussions on the chapters included in the body of the dissertation have been restricted. To the worker it conveys no meaning. Moreso, the constituents chapters have been arranged in sequential manner. Afterall, the prime objective of the work constitutes the problem framed, methodology, applied, materials examined to pool necessary data, analyses made and results achieved. Finally, the major focus is on the interpretation, corroborated with data. All these components have been attempted in specific manner, of course with the consideration of limitations on part of the worker himself.

EARLIER WORKS



INITIATION OF WORKS

Most of the works, especially researches can seldom be considered as new or appearing for the first time. Exception from this norm are not altogether absent. Instead of the same, most of the works are the continuity of earlier works, either to refuse, to confirm or extension of the coverage with inclusion of new dimensions. This does not mean that there is no such research work which initiated a new thought process yielding data, information and/or results which were never conceived earlier. The present worker concedes that the work undertaken tangentially belongs to the first category, not the second one. It can not be denied that there are intrusions of some new elements in the present study. Many a rock art sites and villages with tribal art, already reported and unrecorded spots were observed by him through reconnoitering. Many of those sites and villages are not new in terms of information. However, the exposition of this nature acts as accumulation of rich assets. In course of explorations, some new rock art sites were also discovered and so also the art works of tribal groups in their respective villages, at least in cases, have been reported.

Keeping that apart, the other points which were practically invented constituting methodology in general. In the methodological vista, the major constituents which deserves mentioning are explo-

ration, documentation, pooling of relevant information (some of which were never thought of), analysis of the data, and above all the interpretation. New approaches have been impelled in the same perspective, primarily of anthropological orientation. It is also true that a few anthropologists have made significant contributions in the arena of tribal art, among them Elwin (1951, 1955, 1959) undoubtedly is placed as the pioneer. With all responsibility, it is proclaimed that no other anthropologists may be equated to him in the study of tribal art in India. However, this does not mean that their works are of no significance. At this point the names of such workers (Archer, 1947; Fischer and Hakushah, 1971; Jain, 1984; Dalmia, 1988) are to be included.

On the other hand, the quantitative dimension in the study of rock art is found to be marked. Unlike tribal art, the study of which has primarily been carried out by anthropologists, in case of rock art, the workers are from diverse disciplines, viz. archaeology, art history, anthropology; very seldom geology. There are a few others who are from the profession of administration and they took up the study merely as hobby. Despite various drawback, weakness and lacuna in their works, when observed from the modern perspective of science and technology, the above mentioned contributions can not be ignored. In the process of development of any subject, there is a pathway of ups and downs, right and wrong which ultimately leads to the stabilized condition. Researches on rock art is no exception from this norm.

In undertaking a research project and in course of the reporting, the present condition or the state of affairs is to be viewed in a condensed form. This not only acts as the background but at the same time the turning point of the work undertaken is to be mentioned with specificity. This will be a marker to indicate the contribution of the work itself. Both the studies on rock and tribal art carried out herein are practically in furtherance of the earlier works in the realm of the discovery of new sites, fixation of new locales, pooling of data which were not reported earlier etc. In the analytical part, the assessment of quantitative distribution, correlation matrix and finally the results and their interpretations are of vital importance. These procedures have been undertaken both with rock art and tribal art.

The most noteworthy constituent of this work is the study of art forms in a conjoint manner with a view to finding out the comparisons on the one hand and connection or linkage on the other. The other objective of such integrated view is to reconstruct the events and episodes and so also ideas and beliefs in the premise of rock art. Hardly any work on this direction have been carried out in Indian context. Few exceptions as points of departure can not be ruled out. The concept of this kind was notably put forward by Ghosh (1984). It may be noted that the present work has its primary focus on this area of conjunction and in the same perspective both rock art and tribal art may be considered as the satellite foci.

In the backdrop mentioned above, indicating the relevance of earlier works, comprehensive but brief account has been put forward. Prior to the involvement, in the same context a few words are to be included as justifications.

The study on rock art has already covered an immense period with a span of more than one century and in such a long-drawn time spectrum the quantum of works already carried out is so vast that it turns unmanageable. In the prevailing circumstances, it is only possible to make an estimate if only representative samples are culled. In this situation of compulsion, it is not absolutely unlikely that a few lapses may occur. Even then, this compromising approach which has been applied here is still the best, in relative sense.

It is believed that in 1880 the spanish archaeologist Marcelino Don de Sautuola first proclaimed the existence of palaeolithic painting in the Altamira caves. Since then similar discoveries were made in various parts of the globe, as in "Franco-Cantabrian area, mediterranean, eastern European area". Similar discoveries were also extended in the near east - as in Palestine and Jordon, north Africa - primarily in Sahara, south-east Asia - in Thailand and Indonesia. Two other continents, Australia and America were not lagging behind. Australia is a vital area for the study of art - specially of the aborigines - past and present. The New World has its prominent place with regard to rock painting. Besides, the above condensed statement of the global perspective, further comment has intentionally been restricted, otherwise the

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focal area may turn fluid. In fact till now there are surfeit of information, came out in papers, books, edited volumes etc. on rock art. A survey on the same is a huge task. More difficult is to make a comprehension. It further needs to be pointed out that the main objective of the present study is on the rock art and tribal art of parts of Central India and adjoining western part of eastern India. Keeping this view in mind, a cursory glance has been attempted primarily on rock art of India and subsidiary addition of the tribal art of the same area. However, a broad review of rock art in India is also to be included, at least for making initiation.

A GLIMPSE ON INDIAN ROCK ART STUDIES

In the discussion on the study of rock art, in historical perspective, focal point has placed on India, simply for convenience in proper management. There is hardly any way out from the same, because the studies on rock art in global perspective is too large and beyond the scope of management. At the same time, the tradition, both of rock art and the study of the same, in India and other parts of the world, Old and New, does not follow the pathway. Similarities between the two groups are not denied but the distinctions are also conspicuous.

On the basis of recorded evidences it appears that the earliest discovery of rock art in India was made by Cockburn (1883). Although there is a postulation that prior to this, Carlleyle made the initiation of rock art study in Kaimur range, but the report was published later. These discoveries only include the morphic type of the rock painting. There is a great doubt on the chronology set for those paintings. Afterwords, perhaps, there was

a period of lull for some time. Later, Fawcett (1901) published an account of rock bruishing from the Edakal cave in Kerala. The continuity of the work was made by Silbermad (1907) with his work in the Banda district of Mirzapur. Anderson (1918) made the discovery of a painted rock shelter in Singanpur, Madhya Pradesh in 1910. He was a scholar per excellence both for understanding and for making conceptual scheme. For a critical feedback on rock art he paid another visit to this area of study with principal Percy Brown of the Calcutta Art College. The latter was convinced with the art form and introduced rock art in the study of Indian art. The present worker availed himself of the opportunity for attending in a number of discussions with some eminent scholars of India, specially Principal Isha Mohammad of Government Art College, Calcutta and Professor Sobhon Som, the Dean of Art, Rabindra Bharati University. For reasons unknown, rock art is being almost completely neglected not only by Indian scholars of art, but also the exclusion of the same from the course content. For proper integration and useful technological interpretations, this area is to be looked into.

Ghosh (1939) made the pioneering rock art study with extreme scientific accuracy. He copied the paintings for proper documentation and further analysis. This of his work may be taken as the first step towards documentation.

The rock art of Pachmarhi area, one of the major foci of the present work, was exposed to interested scholars with the report made by Gordon (1939-40). Gordon (1940a, 1940b, 1958) continued his work in furtherance with extension of both horizontal (areal) and

vertical (temporal) dimensions. All of his results and conclusions may not be accepted. Even then, he endeavoured to study rock art in a different panorama, with new methodology and nonconventional ideas. Gordon and Allchin (1936) pursued the study of rock art both in extensive and intensive manner. On the whole, the materials of these research works are considered to be the great wealth. But in majority of the cases, all the conclusions are not always agreeable, especially the issue related to chronology. These shortcomings may be explained due to lack of scientific methodology. Like the art works of historical period, style and motif can seldom be considered as a pointer/indicator for the determination of genuine chronometric data. Nevertheless, all these works, have led the foundation for rock art research in India. And in the initial stage, some lapses are not unusual.

In dealing with Indian rock art, V. S. Wakkankar is considered as one of the very few mentors. He was practically a full-time researcher on rock art as revealed from his manifold contributions (Wakankar, 1962, 1975, 1976, 1978, 1984). This has practically commenced an academic wave in the field of rock art. Scholars from a number of Indian Universities and other research institutions came forward to study rock art. Among them some of the notable workers are : Khatri (1964), Mathpal (1976), Misra et al. (1977) and Sankalia (1978) of Deccan College, Pune, Sharma (1980-81) and Varma (1964) of Allahabad University, Sundara (1968, 1974, 1984) of Karnataka University, Dharward, Sonawane (1984) of Baroda University, Vadodara, Khare (1984) from Archaeological Survey of India, Panth from Banaras Hindu University, Varanasi, Pandey of Sagar University,

Sagar, Reddy of Andhra University, Visakhapatnam, Pradhan of Sambalpur University, Sambalpur, Mathpal of Museum of Folk Culture, Bhimtal, Kumar of Dayalbagh Institute, Agra and obviously many more. The number is continuously increasing with significant growth rate and young (in age) scholars are entering in the fold of rock art studies. Some of them are working with senior scholars/teachers and others have started independently with the guidance of experts. The momentum of this study has also been accelerated even by other scholars as P. V. Prakash Reddy of Andhra University, Rakesh Tiwari of U. P. State Archaeological Museum, N. Chandramouli of Telegu University and A. K. Ghosh and S. Chakraverty of Calcutta University. The latter team of workers has the identity, especially with anthropological approach, methodology and interpretations. Their works are provided with the speciality in bringing out a continuum between early rock art and tribal art of the present day. This line of action has great resemblance with the similar or allied works carried out or being conducted especially in US, Canada and Australia. In these countries, anthropologists are doing the work which are being done by the archaeologists. For such a distinction in terms of discipline the work in its totality has different characters, with inclination to add the people and their life style. This appears to be a logical course of action for the purpose of reconstruction, instead of speculations. It may further be conceded that this is not a full-length list of scholars engaged in the study of rock art but only an attempt for a cursory look.

It is also important to mention that the elevation of rock art study in India is approaching to a zenith as revealed from a number of organization in which rock art study is taken as a prime

component. This is revealed from the establishment of the Indian Rock Art Society - Sagar and Rock Art Society of India - Agra, Indira Gandhi National Centre for the Arts - New Delhi, Indira Gandhi Manav Sangrahalaya - Bhopal.

During the pre-independence period the work of the foreign scholars may be explained in terms of their presence in India in different professions but during the post-independence period the flow was found to be continued, mainly by selective experts. In this connection, names of such scholars include Brooks (1973), Neumayer (1983, 1985, 1992), Bednarik (1993) etc. There may be more but they have not turned quite conspicuous either for the work they have done or for paucity or nonavailability of their publications.

In the perspective of aerial coverage, rock art sites are (Fig.1) found to be distributed from Kashmir in the north (Pande, 1971) to Kerala (Fawcett, 1901) and from Rajasthan (Sonawane, 1984) to Bihar (Mitra, 1923; Chakraverty, 1995). In such a wide and vast area, the concentration of the sites do not show a regular pattern. Instead, conspicuous diversities are met with. In cases, the sites are few in number and loosely scattered. On the other hand, there are regions where the sites are of frequent occurrence, giving rise to a higher density. Besides discovery and description, the scattered sites have seldom been taken care of for different forms of study. The sites with higher frequency and greater density have been attempted to work out in greater details. The progress of research on rock art may be viewed as a stagewise process. The total system includes discovery, description, retrieval system of data or samples of art (either by drawing or photograph or both),

indicating colour, size and identification of the art motif. In cases endeavours have also been made for a kind of classification being based on different attributes like motifs - found in isolation or in association, colour-scheme, placement etc.

Interpretations are not totally lacking but in majority of the cases, these are unrealistic and at times irrational. It is to be pointed out that exceptions are there, as with Mathpal (1994).

Art is a part of culture complex. This turns complete with the involvement of a number of dimensions. Many of these are present in one way or another. In spite of the fact, the greatest hindrance is met with chronology. So far, the dates estimated are mostly non-scientific, based on style and motif. In the milieu of cultural variation and diversity, such parameter is scarcely useful, obviously for absolute chronology and so also for relative estimation. Mention may be made about stone tools, specially microliths. Such tools, even sites of the same industry, are found near rock art sites. But this does not mean their simultaneous contemporaneity. There is no absolute proof that the microlithic culture, if not of chronological phase, and rock paintings belong to the same period within a specific time range. Considering these issues, the perspective of chronology has not carefully touched upon. This area of research with chronology being prime aim is still blind or blank. Necessary programme is to be formulated to uncover the problem of great interest. No bias should be there to push back the date with a view to fitting in within the framework of stone age culture. At times, culture is found to be placed in the backwater or even

with stunted growth. Thereby an earlier form of culture continues without change.

Herein, only a simple review of pertinent earlier works have been displayed without going into critical estimation. Some of such issues will only be taken into consideration in the appropriate context in the main body of the present work.

TRIBAL ART - A QUICK GLANCE

Works on tribal art is comparatively rare on the basis of quantum of published report. Even then, the workers, although very few, have carried out researches in intensive manner. These works are provided with proportional balance between data and interpretations. Elwin (1951, 1955, 1959) has brought out a unique paradigm between outward expression through art and inner ideas and beliefs which are practised by the members of the society. This specific model has been thoroughly worked out in his work on the Saoras (Elwin, 1955). There are a very few works in which crafts have been included within the domain of art. As a result pots, marks, wood carvings etc. have been included as data and the interpretations appear to be logical and stable. Among these works, mention may be made of Dalmia (1988); Shah (1985); Jain (1984); Sarkar (1992); Archer (1947) and others.

Works on tribal art, already carried out, bring out a wide vista. The major points include the tribes who are practicing art (painting), their locations along with belongingness to linguistic and ethnic group, the economic pursuit, material culture, religion etc. At the same time other information close to art are also avail-

lable. As, why the art is produced - the causal factor, who are the artist, what are the contents and explanation of the same, when the picture is made, what are the colours, what other accessories are used, who teaches the course on art and what is the method, whether any taboo or restriction is imposed on art or/and artist. At the same time the attitude of viewers may also be understood, pointing to system of communication and traditional set up with its change.

RELEVANCE OF WORKS : PAST AND PRESENT

It is true that a dichotomy is found to prevail as revealed through processing of data. This is also revealed in interpretations which turn to be full proof within the living tribal communities. At the same time, change, both micro and macro, can also be visualized. Similar scopes are not found to be tangible in case of rock art. Only data are pooled from the art motifs depicted in rock art. Even the life style may ^{be} reconstructed with the analysis of data. It is proposed to consider these two aspects of art, viz. art and its functions in an integrated manner. Such programme will assist to explore the genesis of tribal art on the one hand and reconstruction of rock art with the aid of similarities, parallelism and survival on the other.

This specific issue which has scarcely been explored earlier is the prime focus of the present undertaking. Earlier works have helped to carry out this work in different ways. The experiences gained from the works already carried out are practically the

lessons for to do and not to do, worthwhile or abandoned. Such experiences also help in making proper modifications and to substitute the older techniques with improvised versions for the purpose of a more useful approach towards meaningful understanding of the rock art vis-a-vis tribal art.

The two sets of art of earlier times connected with rock art and of later period, concerned with tribal art may be viewed from a number of perspectives. One of such dimensions is related to segregation, pointing to differentiation. The other view is of integration in stagewise manner with the planning of survival in continuity. For the purpose of proper applicability and the working process both these models have been taken care of. The former aspect give rise to the special features of each one of the two sets. The later model is the examination of one set which is more known with the comparison of other less known set, rock art in the present case. This specific points has been included here with a view to focussing the present problem undertaken in the background vista of earlier work.

THE PROBLEM



PRIOR TO THE PROBLEM PROPER

The prime aim of this chapter, entitled "problem" deals with the focal question which has been taken into consideration. This has been attempted to discuss in great depth and wide magnitude, of course in comprehensive manner and brief form. At the same time, the basic difficulties have also been indicated. So that the constraints which are still existing may be known. It is to be indicated that to begin with the study on rock art, there were diverse limitations. Later, through time a number of them have been resolved. First, with the progress of work, new information and knowledge have been generated and the cumulation of the same have acted for the purpose of better decipherment with relatively greater accuracy. Secondly, many allied subject/disciplines have made contributions in the area of rock art and thereby in certain respects a good deal of clarification is observed. Thirdly, the development of science and technology has subscribed not only in solving the problem but at the same time it has made substantial feedback for wiping out some of the major limitations.

In very brief form, it may be stated that in the initial phase of the study on rock art, there were hardly any problem oriented work. Most of the earlier works were mainly the discovery of the rock art sites and description of both the sites and art forms. In normal course, though unfortunately, there was no set pattern of

standardization. As a result, resemblances, differences and comparisons can hardly be made in exact ways. This particular drawback was identified much later and afterwards a scheme of standardization was attempted (Mathpal, 1984). However, neither the standardization was full proof nor all the workers have followed a consensus. In strict reality, these lacuna have not been taken into consideration with utmost spirit by the workers themselves. Even the organizations concerned with rock art in India both in national and regional levels have not taken this issue as of high priority order.

The above noted fact has turned to be conspicuous in course of the present work. Accordingly it has been endeavoured to arrive at as a kind of suggested consideration. Thereby, a fullfledged communication system may be developed. In many cases, the earlier workers did not follow the minimum scientific precision and thereby the ambiguity went on increasing. In very recent times, the scholars dealing with rock art are at least trying to follow the scientific procedure, so that the precision may be made. However, the situation is still clear nor the stabilization has been made. Rather there are intrusion of certain elements which are problematic.

THE OVERALL PROBLEM

The present problem of the study, in a composite form, indicates a number of components. In view of the same, the major constituents are to be discussed and then the integration has been attempted. The principal componential features are : rock art and tribal art. The terminology 'rock art' is still open. On the other hand certain discrepancies are met with. The word 'rock art', in

simplistic form indicates manifestation of art on rock. As a matter of fact, the chronological dimension is not taken care of. In reality, creation of art on rock is found to be present from prehistoric time to the present day. Again, the word 'art' encompasses diverse creations as - painting, engraving, sculpture etc. In the perspective of chronology, dealing with rock art, the prefix 'early' has been intentionally added so that any present form of rock art may be segregated from the former forms. Although, the fact can not be denied that the spectrum of early phase of rock art in India in specific form is yet to discern. For overcoming this limitation, it may be stated that from the scope of early rock art, the direct and indirect evidences of historical documentation has been set aside. The exception from this norm deserves mentioning. At times, some ancient (this term has been specifically used here, so as to indicate that those art forms are of a very early stage) rock art have been pointed out in historical records and in majority of the cases, the dates are either not mentioned or placed with the earlier time period, compared to the historical period. About the date on rock art, even early rock art, there are suggestions, in few cases the deductions are not illogical. But the confirmation of this is markedly absent. The major methods for such deductions are superimposition, form, style and morphology of the motif, the degree of brightness or the dullness of the colour of rock art. The present author does not totally disagree with such methodological application. But the resultant chronology is only of comparative nature. It does not indicate the chronology, definitely of absolute form and even relative scale of dating may be considered as confirmed.

In the perspective of archaeology, several times it is observed that the earlier traditional traits of culture is found to continue and even mingled with modern traits, either in association or even in isolation.

Chronology of (early) rock art has also been attempted to discern on the basis of associated traits of culture complex. The glaring example is a kind of amalgam, association between rock art and stone tools. This kind of situation can be accepted with extreme tolerance as association but it does not convey the strict connotation of the term assemblage (Childe, 1956). Unless the assemblage of the above nature is discovered, the mode of determining chronology with the application of the methodology of association can seldom be accepted. Similar instances are found to be expressed in case of rock art, specially through the expression of the motifs. There are rock art specimens in which metal tools like axes, swords and such other items are depicted. There are other specimens in which non-metallic tools and weapons, as bows and arrows for instance are shown. There is also a third category in which non-metallic and metallic tools and weapons are found to occur simultaneously. If the depiction of non-metallic tools are considered as markers of pre-metal stage, the occurrence of non-metallic and metallic tools remains unexplained within the same milieu. In other way round non-metallic, combination of non-metallic and metallic, and only metallic tools and weapons may be representative of pre-metal, interphase and metal stage. But in the same spectrum, the style and motif are expected to be changed. The contradiction of this nature is often met with.

There is a special and interesting point which is to be included here. The scholars in the field of art are provided with their own system of methodology. In the same corpus, they are putting special attention on the technology of art, which may be reconstructed from the art object. In the same sphere, emphasis is laid on tone, texture, stroke etc. on the one hand and the dynamism indicating movement and such other forms on the other. This particular issue has been discussed in great depth and necessary details with a number of artists of great stature. All of them are never convinced with the rock art, shown to them through slides and photographs, with regard to the chronology thought of by a number of scholars from the rock art study.

With regard to chronology, there is a different perspective, dealing with dimension. One is concerned with the time, preferably in absolute scale. The other deals with a chrono-cultural frame indicating the stage of development of rock art. Because of the dearth of relevant data of convincing form, it is worthwhile to pay greater importance to spectrum of chrono-cultural episodes than absolute chronology. The former dimension appears to be fullfledged in terms of the motifs depicted and the places - both sites and localities in which the rock arts are found to occur. In the same scale, the word 'early' is acceptable and in conformity within the milieu of rock art.

A great part of the problem dealing with the rock art, one of the major components of the present work, has been discussed. The work undertaken has been made both fullfledged and fullproof with

the inclusion of a number of attributes and variables. The respective trait have been examined in intensive manner and both quantitative and qualitative assessments have been carried out. Instead of qualitative assessment, the quantitative counterpart appears to be specific and greater stress has been laid on the latter.

For the purpose of illustrations of the forenoted points, a number of examples, have been included. These comprise morphic types - as anthropomorph, zoomorph, phytomorph, non-figurative motif both in isolation and in combinations. The size of the motif (primarily paintings, barring a few insignificant number of engravings) in the broad scale of small, medium and large and colour of the paintings - monochrome and bichrome. The other traits include the technicalities as - only outline, filled in or blocked, x-ray pattern; the perspective of the drawing as imagined by the artist and that too is also the perspective of the observer - as from the side, front, top and other composite perspective with the juxtaposition of two views as fronto-lateral. The figure, the paintings also indicate the conceptual idea of the artist which is to be communicated to the viewers as - naturalistic, stylistic, schematic etc. Further details on the above items have also been carried out with thorough and intensive scanning. It is to be noted with emphasis that besides the occurrence of the specific traits in quantitative terms, correlations primarily bi-variate and in cases multi-variate have also been attempted. The total gamut already described and discussed earlier turns to be a major part of the specific problem.

With slight deviation from the core parts of art, the graphical attributes have also taken into consideration. In a place where rock arts are found designated as a site. Where a number of sites are found to be present in the vicinity but with some geographical restrictions, the special areal coverage has been termed as locality. In the present work, there are three localities, namely Pachmarhi in Hoshangabad district of Madhya Pradesh constituting a number of sites. Isco in Hazaribagh district of Bihar and Ulap in Sambalpur district of Orissa. In the concept of locality (Fig. 2), considered herein - Pachmarhi, is notable because there are a number of sites in close proximity giving rise to a compact matrix. On the contrary, Ulap and Isco locality is provided with single site in each case. The other sites in the same region is too far from one another and thereby a concept defined here on locality does not follow suit. For all practical purposes and so also the convention followed, the term area is of greater spatial dimension within which a number of localities are found to be present which in turn gives rise to one or in majority of the cases multiple sites. In fact, the composite exercise on the three localities, already mentioned, may be considered as an area specially when the said area is to be compared with another area placed at a distance.

The next component of the problem actually emerges in the follow up process. It is not really known about the makers of the early rock art, irrespective of the apprehension - prehistoric or immediately post-prehistoric. Even then, it is a crucial enquiry. It has already been stated earlier that the art forms are primitive, used here as opposed to modern, in relative sense. For the same

rationality, communities which are provided with a primitive form of culture with special attention on economic pursuit has been searched for, both physically and in terms of academics.

In the above noted three localities or in proximal vicinity area, a number of tribal groups are still found to be present. Moreso, they are somewhat indigenous. Even if migration or movement is apprehended, it must have took place long back. Majority of those tribal groups have been examined either from the reports came out in the forms of monographs or papers and so also empirical field studies by the present worker himself. Despite the presence of a number of different tribal communities, only some of these groups practise art. For the purpose of the present study only those tribal groups which possess traditional art forms have been scrutinized. The importance of interest turns intensified when a few of the tribal groups with their traditional artistic expressions have some resemblances, in relative sense, with the rock art, especially in the adjoining area. In this case, the orientation has been made keeping in view the main problem and the prevailing circumstance. After explorations and tests, three tribal groups have been selected as samples. These are - The Korkus of Madhya Pradesh, Juangs and Lanjia Saoras of Orissa.

In the distribution pattern of the forenoted three groups, a kind of proximity with the rock art is found to occur. A great majority of the Korkus are living in the Pachmarhi locality. The Juangs are close by to Ulap locality and not far from JSCO rock art site in Hazaribag. Such kind of close relationship is missing between the Ulap rock art locality and a tribal counterpart. For

the circumstance of this nature the Juangs and Lanjia Saoras have been selected as the samples who have got two special characteristics. Both of them possess exquisite art work and in terms of a generalised and broad coverage, their art works have close affinities with the early rock art in general. As a particular point, the Saoras, with the considerations of a number of sub-groups have a wider distribution. In the same scheme, the Saoras are found in the nearby region of Ulap locality. As a result of culture change, more specially of modernization, the Saoras have been transformed to a great extent in many ways, including the religious aspect. This change over has given rise to the assimilation of a number of new traits in their total culture complex. At the same time, the trait of traditional art has been excluded. However, earlier the Saoras belong to a composite unit. For the purpose of finding out the relationship between early rock art and traditional tribal art, a pushback system has been made, so that at least the genesis of the art forms may be recapitulated.

With regard to the art, in holistic form of the tribal groups only concerned has been made with the already mentioned three tribes. All the traits or characters taken into account in case of rock art have also been carried out in the fold of tribal art. In addition to the same, other information have been culled. These include technology in reality, connection of art motifs with different ideas and beliefs and other information of secondary relevance. The second set of information are available and only possible to collect in case of tribal art. The reason being their presence and so their art may be considered as living form. It is

hoped that these traits which are under the unknown sector of rock art, may be used for the purpose of reconstruction on the one hand, and relationship, if any on the other. The principal method followed to cope with the problem is the belongingness to similarities and differences as identifiable characters, survival of the trait complexes and analogous conditions.

In addition to the above mentioned two components, studied separately, the third components may be treated as a kind of conjunction.

It is obvious that early rock art and tribal art have their own identities and special characters. Differences between them is quite obvious. This may be explained in two ways, namely spatial, concerned with different groups and their geographical distance which gives rise to cultural milieu in different environmental conditions, resulting change in life style. This is found to be convincingly illustrated with the three tribal groups taken into account. The other factor is related to time. Temporal change either spontaneously or through induction is inevitable. Examples of this nature has already been touched upon with the Saoras.

The question crops up about two major issues, at least to begin with. Why many of the motifs between the two sets, namely early rock art and tribal art, are found to occur in perceptible form? The localities of rock art and tribal art are either superimposed or in close proximity - what is the explanation of such coexistence? In fact, these two basic questions are the main foci of the problem and accordingly the methodology has been developed.

In summing up, the problem part, a hypothesis has been formulated on the basis of the information culled from the existing literature. The peak part of the hypothesis is to find out the resemblances and differences between the two sets of art and finally attempt has been made to find out the relationship between the two, if in existence, In doing so the analyses have been made both in micro and macro levels.

SCANNING OF THE PROBLEM

After the broad coverage of the problem, the problem proper has been scanned with a view to finding out the different units. The units have been treated separately to begin with and later the relationships between and among them have been attempted to draw. The major units are art, rock art, tribal art, and life style depicted through art. With regard to tribal art there is a coherence with the exact life style of the concerned tribes. In the same perspective the reconstructed results and those of reality have been compared, for the purpose of understanding the difference, if any, and the degree of variance. In case of early rock art the probability of above nature appears to be mostly non-existence. There is hardly any information about the communities responsible for making of the same.

ART IN GENERAL

The present work is outside the fold of art proper which are conducted by artists, art historians, art critics etc. On the other hand, in the present case art have been viewed from the

dimension of anthropology in which the cultural perspective is of great importance. About the origin of art, there are speculative hypotheses. Some scholars are of the opinion that art does not serve any function except the pleasure drawn by the artists and the viewer. To some others, the thought process is just opposite and there is a great bearing with functional aspects. Depiction of various traits of culture, cultural activities and such other scenes or motifs. All may be included as functional aspects of art. The above noted figures serve the purpose of communication, primarily to the members of the respective group, practicing art. There is another dimension which is associated with non-materialistic ideas and belief as of local mythology, gods and goddess, monsters and demons etc. In the latter arena the connection between some of the pictorial motifs, specially zoomorphic forms may be related to the totem. This concept may not be too old and at the same time it is not recent. These are some of the issues which have been taken care in studying art, from the domain of anthropology.

Art is also provided with other features, as the technology. This area covers a wide spectrum. The prime consideration is on the artist with the inclusion of the training programme in which both teachers and taught are found to be associated. Like most forms of traits of culture, art is also handed down from one generation to another. Thereby the continuity is found and at time changes are inevitable. Alterations may be feeble or great. Changes might have taken place either spontaneously or through induction or even for compulsive adaptation. All these issues are to be taken care of in any anthropological discussion on art.

The component of technology already described deals with biological, social and cultural milieu. In addition to the same, technology of art also include a number of basic materials like canvas, brush, paints including the pigments and the base. If some figures are drawn on two different types of canvas there are convenience and inconvenience on part of the artist but such micro-difference surpasses to the viewers in understanding. The attributes of canvas comprise the size, the foundational base with nature of structure and the placement. With regard to positional canvas a number of factors operate in the process of selection. For all practical purposes, the painting on the canvas may be viewed with much inconveniences on the part of viewers. The position on the canvas and the effect of sunlight during different parts of the day works as characteristic features. These considerations on canvases are primarily useful in projecting visual effects on the viewers and the psychic inputs in its term.

In modern times the physical and chemical researches on source materials natural or synthetic, have made significant progress but during earlier phase either in the term of chronology or developmental sequence the condition was very primitive. Artist of earlier times, in both the forementioned senses, were totally dependent on natural sources mostly on geological information and the decomposed parts. Oxides of iron are primarily used for different shades as brown, reddish, yellow, buff etc. In case of organic material, charcoal might have served the purpose. White colour is collected from derived products of calcium. About these information not much

progress have been made from the chemical analysis. It is thought of that for prehistoric/primitive painting, the pigments were collected from the vicinity area. For the purpose of conformation, analysis of elements is essential which is expected to put forward the correct results. No such work has yet been planned in Indian context. The present author has not ventured himself in such an exercise. It is also said that a few other materials were used to derive the colour. Even these suggestions are only the guess work.

The base of the painting may be worked out and even some other organic products like oil and lurd. The latter materials are more probable specially in case of oil paintings which are provided with luster. Water as the base material is not efficient. A good many chemical pigments are not totally soluble in water. Water does not have the property of sticking and at the same time, the paintings with water as base are of temporary or small duration in longevity.

ROCK ART

In broad term rock art indicates any depiction of art on rock. In the present case, the data primarily includes paintings and engravings albeit the former are numerically dominant. There are many a substantial problems related to rock art. These include the genesis, chronology, areal distribution, the makers, the factors responsible for the production of rock art. Some of the above noted problems have been dissolved to some extent. At the same time other problems are placed still in the dark. On the basis of the modern technology it is not unlikely that some of the so far unsolved problems may be solved. But there are other problems which do not

indicate greater probability for solution. The constrain of this kind have been taken into consideration. This will be more relevant when the issue related to tribal art will be discussed. In examining both rock art and tribal art in an integrated manner, there may be some difficulties with regard to genesis but the developmental perspective can be understood to a great extent. This is also true in case of the functional implications of rock art.

In studying rock art greater emphasis have been laid on distribution, motifs and morphological types, with the inclusion of quantitative assessment. In such treatment quite a number of information emerged. The context turns more confirmed in establishing relationship between and among a number of characters. Example may be set forth at this point. Anthropomorphic and zoomorphic motifs are found in isolation, conveying a kind of distant relationship. Whereas the association of both the morphic types reveals a kind of coordination between the two sets, with the indication of utilization of animals and animal power for human beings. After all through time man enabled him to draw the animals close to him and utilized the animals for different purposes. The other example is concerned with the coordinated results, comprising a number of attributes, namely size of the figure, morphological type, use of colour etc. indicate various results of correlation. In the present undertaking only those problems have been undertaken which are not provided with greater limitations and so also the data are satisfactory in nature. Finally, it may be concluded that it is practically impossible to involve in too many problems which may lead to confusion and contradiction.

TRIBAL ART

In blanket term the word "tribal art" connotes art work performed by the tribals. At the same time it is to be pointed out that all the tribes (in India) are not practicing art, specially paintings. There are a good number of tribes, specially in the north-east who are creating art object on wood, bamboo etc. (Das, 1982). There is no specific pattern, so far known with regard to distribution of tribal art in India. In the same area there are a number of tribes and some of them are found to be engaged in art work, specially paintings, while others are devoid of the same. This particular topic is a problem oriented one and in no way it can be considered as a topic, totally concerned with tribal art. In fact, tribal art has been taken as a compact set of art works with the primary view to understanding the rock art and the connection or relationship between the two sets.

In case of tribal art there are similar problems as found to encounter with rock art. However, there is good scope and better opportunity to bring out the solution as on function, technology, ideas etc. In view of the same, in case of tribal art the major attributes taken in case of rock art have also been considered so that a standardization may be made for the purpose of proper comparison. On the other hand the data related to identification of motifs, their purposes, functions, relationship with the tribal groups have also been taken into consideration and these known facts are of great help for the purpose of making reconstruction on the unknown aspects of rock art. In formulating the problem in the

sector of tribal art , the existing information, results and even interpretations made by earlier workers have been collected in an organised manner. Thereafter it was observed that there are some lapses and for the purpose of compensation those data have been collected by the present author through fieldwork and with the application of appropriate methodology. It is interesting to note that the tribal groups practicing art, specially paintings, have a dual notion about the rock art in the vicinity area. They do not have a clear understanding about rock art but at the same time they have got both respect and regards. Simultaneously many of the rock paintings have been attempted to explain in terms of mythology.

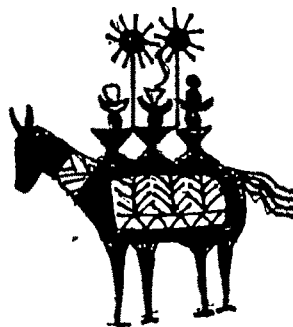
This area of inquisition is indeed difficult. Mythology is seldom reliable. In majority of the cases there are exaggeration on the one hand and on the other deductions are not totally absent. However, a clear cut methodology is to be developed for the degree of deviation in the direction of apt standardization. This complicated issue has not been ventured in the present work.

As already mentioned, the prime objective of this work is to find out a kind of correlation with the aid of which the linkage if any, may be established. This aspect, according to some scholars, belongs to the sub-discipline of ethnoarchaeology, allied to ethnographic analogy or parallel (Hole and Heizer, 1965). This methodology has also been applied in different parts of the world, specially among the indigenous American Indian communities (Grant, 1967 : Tomkins, 1969; Schaafsma, 1971; Mallery, 1972; Patterson, 1992; Patterson-Rudolph, 1993; Slifer and Duffield, 1994). But it is to be remembered that both the context and the condition in India and US are not same, rather appreciable difference are met with. As a

matter of fact in accordance with the problem on the one hand and the available data on the other the appropriate methodology is developed and this may be considered as to establish the continuum between earlier prehistoric and later modern primitive communities, specially in the overall pattern of subsistence economy.

Without going into the great details on this part of problem in a pointed manner it may be said that rock art and tribal art are to be compared. Thereafter other attributes present in one set of art, specially tribal art and absent in other set, that is rock art are to be examined with precision with a view to projecting the data and results for the purpose of logical reconstruction. In making reconstruction the main issue is life style which constitute economic activities, settlement, expression of flora and fauna and deduction of the relationship between man and animals - plants, the special feature of material culture, the supernatural deities and such other issues. The war scenes are quite marked in rock art, compared to tribal art and in case of the former the vivid expressions have been attempted to make with warriors, tools and weapons, dress and uniforms and even the beasts of burden. It is somewhat problematic to explain these sequences of diverse fighting episodes. It is not really known whether it is within the group or between two groups or even two other groups without the involvement of the communities who were engaged in painting. However such scenes reveal that the painters were witnesses of the fighting episodes, either directly or indirectly. Whatever be the case there is a conspicuous impact of the same which has been expressed in art.

METHODOLOGY



WHY METHODOLOGY

In presenting the work like this, the specific information, in brief but comprehensive form, are to be supplied with about the prime and focal enquiry, that is about the present study. This begins with why such study has been undertaken? The reason for selecting the problem or the topic of the study. This has not really been searched for in the form of exploration, rather this is coming into existence on the basis of information in the repository and these also indicate a number of major lags. If one is not aware of the major works already undertaken in a specific area, the real problem which has been taken in consideration for the purpose of study cannot be found out. The major area of the work is anthropology which has relevance in the perspective of art. In other words, one can say that this is related to the study of art with the anthropological methods in the perspective of anthropology. "Art" is very difficult to express in the form of definition. Moreso, simply the word art does not convey much sense because there are many division, subdivisions, and groups. Here art has got two major sets in the vista of chronology, not always in an absolute sense and very broadly in relative order. One is termed as prehistoric or early period, better be said as ancient art. It is displayed in the form of rock art, in two ways : as paintings and/or engravings.

In many places such as Europe, Australia and such other countries, to begin with rock art was not properly and meticulously dated. But it was thought to be prehistoric. Later in places the geological chronology has been ascertained. In recent times, with the application of scientific methods and technology, many rock art sites have been dated in terms of absolute chronology.

Methodology may be viewed as the technology, with the coverage of both programming and operations. Like technology, with the application of methodology the product will be achieved. Prior to the same, among the products to be made, there will be a clearcut perception. This is pertaining to the problem - that is what is to be achieved. At the same time, the ultimate product is to be made more precise and accurate, depending on the application of appropriate methodology. In fact, the two ends comprise the problem and the result which are related to each other with the aid of methodology. In view of this model, it appears that the problem part, as meaningful hypothesis, is an important criterion. The same character is to be properly taken care of with the selection of methodology.

METHODOLOGY IN VOGUE

From the very concept of studies on rock art, so also tribal art, the problem was envisaged. Naturally in the initial phase, the problem was either too simplistic or more complicated. About the simplistic form, the explanation is also naive, mainly of discovery and expression in descriptive terms. The complicated network does not convey much sense, if not explained. Rather, it is formed as a kind of agglomerate of disjointed ideas or even unconnected imagi-

nation. Through time, attempts were made to construct methodology as in accordance with the problem. In the pan-world context, both problem and methodology concerned with the present topic made an accelerated progress. This is primarily due to intense and diverse interest on rock art studies. The methodology was also geared up with the coordination of scientific devices and technological inputs. In this connection mention may be made on the works of a number of reputed scholars : (Graziosi, 1960; Ucko and Rosenfield, 1967; Marshack, 1972b; Leroi Gourhan, 1973; Anati, 1977; Bednarik, 1992, 1993) and others. Instead of making a long list of names, the representation is made on institutional basis instead of individuals. In the works of above-noted scholars, the problem part is not only clear but also tangible. When the problem is devoid of ambiguity only then for the purpose of solution, methodology may be formulated and tested.

Keeping the view in Indian context on the problem and methodology, the confusion is found to be lingered for a long time. As a result, no significant development is observed. In the earlier works carried out by Cockburn (1883, 1899), Silberrad (1907), Ghosh (1932), Gordon (1939 - 1940, 1958) etc. the primary focus is found to be laid on discovery of rock art sites. For the same, the primary methodology was centering round intensive exploration. Most of them endeavoured to make proper documentation which were relatively satisfactory, but at the same time it was below the standard level of precision, as of very recent times. Documentation of rock art simply by sketches and with the aid of photography makes distinct differences. The disagreement is found to prevail with regard to shape, size and

tonal characters. Later on, a state of confusion prevailed. The basic proposition for work was on rock art for which there was an assembly of workers from various disciplines like history, archaeology, art history and of late anthropology. The abovenoted workers had diverse background and training. As a result, the concept part was neither clear nor ideal. In addition to the same, in the beginning, there was not much contact and coordination between the workers from the above noted fields and of other disciplines like geology, chemistry and even basic science and technology.

There is another important issue which is also difficult to explain. When the scanning of the problem and application of methodology on rock art made perceptible development in other countries, studies in India, specially by Indians remained at the backwaters. The other attribute deserves to be explained about the stagnant condition of the workers on rock art, studying in India but came from developed countries. It is not very useful to discuss the methodological aspects in the study of rock art in the global dimension. The same form even in India does not indicate change of worth mentioning nature. It is not untrue to state that there is hardly much evidence of methodological development in the rock art studies in India. The glaring example of the same may be shown from the utilization of the same unchanged method over a long period of time in places even today. It is apprehended that in majority of the research projects on rock art in India, do not have scientists as the members of their respective reference groups. With regard to the scientists and technologists, there is a wide communication gap between them and the workers on rock art. It is only the anthropologists who are conversant with both the major disciplines can, perhaps, fill up the gap.

In connection with tribal art, the scene appears to be more dismal. For reasons unknown, tribal art has mostly been studied by anthropologists, seldoms by artists, barring a very few isolated examples. To the anthropologists, rather the social/cultural anthropologists, this issue has not been stressed to highlight by many anthropologists in India and others who have worked in India. Varrier Elwin (1951, 1955, 1959) may be considered as an isolated example. He was provided with keen interest and paramount capabilities in dealing with tribal art. His potentiality is found to be extended as far as the interpretation within the milieu of culture. A few other scholars from anthropology and related disciplines (Archer, 1947; Das, 1992; Jain, 1984; Chakraverty, 1986; Mahapatra, 1992; Sarkar, 1992 and Ghosh and Chakraverty, 1989) made sporadic attempts on tribal art. In most of the cases these works do not form a proper matrix with consolidation. All these scholars have applied primarily anthropological methodology.

Rock art had its emergence quite early and by now a large number of sites have been discovered in India but few have been properly documented. Simultaneously, tribal art is a special phenomenon and that too has not always been worked out seriously. It is true that both the above noted sets are not same but some amount of similarities can not be denied. A kind of coexistence between the two sets is apparently observed in terms of location, form, style and content. Despite these, practically no arduous attempt has been made with a view to finding out a kind of correlation between the two sets. The present work may be considered as the

maiden endeavour along this line to find out the correlation or even the relationship along with similarities and distinctiveness in the process of continuum between the rock art and tribal art. For new perspective of the problem the methodology was developed. It was tested and in cases modified or changed to achieve a full-proof system, at least as far as possible and practicable.

METHODOLOGY IN ACCORDANCE WITH THE PROBLEM

The specific area has two major temporal componential segments, namely rock art and tribal art. In dealing with methodology with regard to selection of the area, a number of steps have been taken into consideration. On the basis of data oriented evidences, already reported, in India rock art is found to be distributed over a wide area, with some gaps in the spatial continuity. The distribution of the rock art is found to be extended from Kashmir in the north (Pande, 1971) to Karnataka and Tamilnadu in the south (Wakankar, 1978). The east-west extension covers from Bihar (Mitra, 1927) to Rajasthan and Gujrat. However, the highest concentration is in Madhya Pradesh (Wakankar, 1962, 1978; Neumayer, 1983; Mathpal, 1984a; Pandey, 1990) with its focal plane at Bhopal. Taking this, simple criterion, Madhya Pradesh may be taken as the most suitable sample area. On the other hand, the spatial coverage of tribal art has a different character. All the tribal groups do not practise art in any form. At the same time a good number of tribes are very much involved in practising art, expressed in the activities of their daily life. Tribes of the north-east, as Naga with its different subgroups and Khasis, Garos etc. possess various forms of arts.

However, these areas with higher density of tribal art do not yield the evidences of rock art. In other words, in the context of art, both rock art and tribal art, there are different areas. The first area constitutes varieties of rock art without tribal art. The second area reveals only tribal art with conspicuous absence of rock art. The third area comprises both rock art and tribal art simultaneously.

One of the prime aspects of the present undertaking is to find out the continuity, if any, between rock art and tribal art. In the same perspective, the area with the presence of two sets of arts is most favourable. In this regard Madhya Pradesh may be considered as the ideal area. Again, if only one area is examined, there may be some gaps and thereby the generalized pattern may not be found out. For the purpose of a kind of compromise, other areas with the presence of ideal situations, i.e. simultaneous records of rock art and tribal art have also been selected. For fulfilling this aim, searches were made and two more areas have been identified. These are : Orissa and Bihar. Between these two areas, Orissa is proximal in the locational layout and it is also nearby in terms of distance from Pachmarhi. Compared to the same, Bihar is distally situated. Such selection with the utilization of specific criterion is within the gamut of methodology.

It is to be noted with prominence that the present worker himself conducted an extensive survey primarily in the states of Madhya Pradesh, Orissa and Bihar. In the said course, quite a large

number of rock art sites have been explored and discovered. In addition, the tribal art among a number of tribes have also been intensively worked out. The number of sites already discovered by other workers and also by the present worker is quite large. As a matter of fact, the total number of sites along with larger number of art motifs are far beyond manageable. In the prevailing circumstance, unbiased, rational and suitable sampling methods were used. The same method is neither exact statistical random sampling nor close to intentionally selected samples. For the present work only any one of above sampling method does not appear to be appropriate. Based on the situation, a sampling method has been developed which is a mixed form. All the sites with the art forms have been placed separately and special care is given on the motifs or the content of the art. This is possible because the intensive documentation of all the sites covering (almost) all the motifs was made. Thereafter, the statistical random sampling was operated. For such a kind of integrated approach, none of the major visible motifs were let out. At the same time the quantum of the motifs has been selected without any bias.

DOCUMENTATION - CONSTRAINTS AND SOLUTION

It has already been pointed out that in Indian context, proper documentation of the rock art as well as of the site is an urgent issue. It is more important for any subsequent analytical study covering different aspects of rock art and eco-cultural factors. Since the beginning for search of rock art in India, the majority of such studies are lacking minimum documentational representation.

Such studies are limited to the descriptive account on selected motifs or figures. Even the descriptive accounts do not include all the least required data on technique, style, form, colour scheme, size, superimposition etc. When the present author initiated his study, he found that earlier workers (Gordon, 1958; Neumayer, 1985) on the rock art of Pachmarhi had ignored to discuss in detail about the individual sites in and around Mahadeo Hills and mainly incorporated selected data to substantiate the hypothetical framework for techno-stylistic succession and genesis of rock art in the region. Such reports do not convey any idea about the frequency of the painting, either of any individual site or within the specific area. During personal field visits to this area, the present author have observed that the earlier reports on rock art of Pachmarhi (Gordons, 1939-1940; Gordon 1941a, 1940b, 1958; Neumeyer, 1985) ignored the number of rock paintings and even the motifs were neither recorded nor described in any standardized, uniform or systematic manner. In response to the same the present author was compelled to take up a very ambitious and time-consuming project in the same area as a measure for compensatory rectification. After the scrutiny of the result of the collected data of the pilot study in the area, a modified, more effective and area-specific technique for documentation has gradually been developed stage by stage.

In India, the usual technique for documentation of rock art is either by simple free hand sketching or copying by tracing whereas the proper use of photography for major documentation of any rock art site have either rarely been suggested or adopted by researchers excepting very few (Mathpal, 1977-78). Free-hand sket-

ching have several limitations, as difficulty in maintaining the relative proportion of different parts for the personal bias of the artist, and aboveall lack of standardization due to personal variation. Copying of the rock art by tracing method may, perhaps, yield better result. But in reality there are many constraints, as rock surface, variation in visual effect, supply of apt materials, damage, personal (human) errors etc. But the depictions located on the inaccessible part of the rock wall, ceiling or within narrow crevices may lead to further complications. The technique of direct tracing of rock art on paper or polythene sheets are much common among some European experts (Anati, 1977). Utilization of such technique is not absolutely rare in India (Ghosh, 1932; Mathpal, 1984).

Photography is perhaps a better substitute for any of the above technique because the accuracy for reproduction is involved and measures for preservation are concerned. The dimension of the original rock art can be estimated from the photographs taken with the scale. By adopting suitable colour-chart and with proper technical control, the proper colour of the paintings can best be reproduced in photographs. By necessary enlargement of the photographs, the size and other technical details of the actual paintings may be retrieved or restored either permanently by printing on photographic paper or through projection of colour slide. For obtaining more or less accurate results in colour photography, a standard scale supplied by IFRAO (international Federation of Rock Art Organisations) and colour charts* were placed beside the rock art motifs in each of the

* The IFRAO scale is in length 10 cm. with long marking of scale and few bands of principal colours (Bednarik, 1991).

exposure. The forenoted photographic technique has been improvised and employed for primary recording and other documentation of rock art. The technique is indeed effective for studying a site within a short time duration. During photographic documentation, each of the motif and composition of motifs were photographed separately. The photographs covering entire wall of each sector were carefully recorded to locate its arrangement pattern, allocation of space of motif either of individual or in aggregate forming relatively larger composition.

Rock paintings are mostly drawn on the vertical wall of the rock shelter. In majority of the cases, the layout of the rock canvas is placed on different planes, falling short of equidistant from the lens of the camera. For the purpose of avoiding the above noted distortions of planes, the most extended wall has been considered as the bench line. From the same vertical plane, a reasonable distance for setting of camera was maintained with the help of pegs. The peg line moves backward and forward on the basis of the distance of the vertical plane from the bench plane. In all cases the camera, set on a tripod in such a way so that the distance between the camera and the rock paintings covered all are placed in equidistance. This method restricts the deviation on distance between the lense and the object to a great extent. The placement of series of photographs and transparencies taken with the application of the above noted method rules out the destortion to a large extent.

For the purpose of studying the details, the photographs were enlarged or have been observed under a magnifier or through projection of slides. For the purpose of working out the details on

forms and features of rock paintings, the unnecessary background which creates visual illusions has been eliminated by bleaching, with the application of chemical treatment or otherwise. In case of further necessity, tracing of the paintings have been made from the photographs with scale. With a view to observing the details, the computer with image-making and colour-scanning facilities has also been enforced.

The documentation of the above nature have already been applied and the results therefrom are better, compared to other existing methods. This does not mean that the present methodology does not have any limitations. In fact, the scope of this method may be evolutive with the progress of science and technology. It is quite obvious that for all visuals, photographs and proportionate sketches, always a scale has been used. The scale on the visual expression of the drawing is helpful for determination of exact measurements of the painting. For further confirmation of photographic documentation of rock art and for other necessary references, proper video-recording of the entire site has been done. The video documentation of the rock art and tribal art is an unique source for maintaining technical precision and qualitative assessment of the photographs, slides and other forms of recorded data. Similar photographic technique has also been applied for documentation part of tribal art and its related socio-cultural practises.

STUDY ON MOTIFS

The motif displayed in rock art has been studied separately. All the major techno-typological features were recorded in a card, with the indication of a number of parameters. The morphic types are classified into 14 distinct categories namely zoomorph, anthropomorph, material trait of culture, zoomorph and phytomorph, zoomorph and material trait, anthropomorph and material trait, zoomorph with anthropomorph and material trait, zoomorph with anthropomorph and phytomorph, natural object, non-figurative motif and unidentified figures. In rock art, three types of techniques are found to be prevalent in depictions. These are : paintings, engravings and painting on engravings. Brushings on rock is not found in three localities under study.

The represented view of the motifs are further classified into eight types. But such views could be analysed for figurative motifs only. The motifs available in Ulap and Isco rock art sites are ^{mostly} non-figurative motifs and the view has not been considered either for recording of data and their further analysis. The direction of the motif is again classified into three sub-categories - towards right, towards left and neutral. The side is determined on the basis of the movement of the body and posture of figurative drawings of individual zoomorph and anthropomorph. The neutral figures are mostly shown in anterior or front view.

The style of execution both in case of painting and engraved figures are of total five categories including stick figure or line drawing, block or solid body, outline or contour, hollow body

partly filled and X-ray figure or filled with pattern. Recording the typo-technical taxonomy, four principal types are arranged which are namely - naturalistic, stylized and symbolic unidentified naturalistic and stylized figures. Naturalistic type of figures are those which conforms to nature and is opposed to idealised or symbolic type of motifs. The naturalistic representations are those which above all else, show movement and vitality. The animal representations which are called naturalistic are those where the stance of the animals is 'natural'. "The naturalistic figures are different from realistic representations in which specific details are observable in the morphology of a subject. Thus realism may be considered as more or less close to perfection. Stylised representations essentially contain the general characteristic of the figure but the feature is reduced to its essential traits. Stylisation is thus and interpretation which omits the fortuitous to emphasise which is permanent and essential" (Lorblanchet, 1977 : 49).

In the present research work the above mentioned concepts have been followed for further analysis but the present worker believes that such discrete stylistic categories in strict sense are not necessarily represented in actual situation. From realism to abstraction, different categories of art reveals the degree of variations only. Lorblanchet (1977) has discussed on this particular problem in appropriate manner as "Concepts of 'realism', 'naturalism', 'stylisation', 'schematisation' and 'abstraction' are vague and ambiguous, for all art must have some degree of stylisation, schematisation or abstraction. The boundaries between these

concepts are not precise. In moving from realism to abstraction an artist frees himself from dominance by sensory perception to achieve conceptual forms, but the transition forms are perceived by the senses to conceive in the mind is progressive".

The definition of the motif is considered as an important parameter during primary recording and the size is measured in major axis, either of height/length or width etc. During further analysis of the primary data have been arranged in three different categories, i.e. large (above 50 cm.), medium (15-50 cm.) and small (below 15 cm.).

Earlier studies on rock art of Panchmarhi or Mahadeo hills area (Gordon and Gordon, 1939, 1940; Gordon, 1958) have shown that the workers had shown special interest in analysis of rock art on the basis of their observations on superimposition of motifs. The present worker included the data on superimposition in two major categories i.e. whether superimposition is present in case of the motif and if present, the morphic type and codes of the both underlying and overlapped motifs are recorded for further analysis.

The colour-scheme of the painted motif is further classified into two categories - monochrome and bichrome. Polychromic motifs are not available in the rock art of three locales under the present study. For monochromic figures, particular colour is identified and systematically recorded. In bichrome paintings, in addition the space for application of each colour is identified.

MORPHIC TYPES - ISOLATION OR COMBINATION

The zoomorphs, either in isolation or in combination with other morphic type(s) are further classified. The identification of type is attempted being cautious to avoid any possible bias. The present worker believe, that the painted motif may sometimes be distorted due to artists' perception and level of skill. So it has attempted to identify the animals in broader categories and seldom it is mentioned in species level. The motif of anthropomorphic figures either in isolation or in combination with other morphic type(s) representing activities are further identified and recorded. Similarly, the material traits which are unattached with any other morphic type is also identified and recorded for further analysis.

Not exactly the same but similar methodology was applied with the data on tribal art. The location of the art has been scanned in different sets like locality or location of village, police station, block, district and state. Along with these identifications of the household was also made including those of the artists. The art forms among the tribes are produced in different seasons or months according to local calendar which are also connected with rituals. The purposes are decorative or ritualistic, connected to religion depending on the deity. In this case other detail characters followed the same line as those of rock art.

In carrying out the analysis, all the above noted traits have taken as separate entities. Afterwards, both possible and rational correlation between or among the traits have been conducted. The

result of this work with the application of appropriate methodology indicates the frequency and the percentage. The results of these analyses help for finding out the broad generalization with the inclusion of other specific and specialized relationship.

It is to be noted that more or less similar format both for rock art and tribal art is necessary and useful for finding out the correlation and comparisons. This is a very special case in which the continuum between the rock art and tribal art may be attempted to formulate. At the same time, the special characters of the sites, localities and areas may be comprehended. In connection with the tribal art, indepth information have been collected from the respective tribes, covering the technology used in producing art, the rites and rituals centering round the art and so also the ideas and beliefs. In case of suitable data on rock art the above points have been superimposed in deciphering the above points.

Mention may be made that besides visual observations, the art objects have been reproduced both in photographs and proportionate sketches. As a result, the cards along with photographs and sketches help in building a repository of rock art and tribal art in the selected area under consideration. Besides the above noted discussion on methodology, there is further scope for dealing with special or micro-methodology in the relevant context within the text.

ROCK ART AND TRIBAL ART - AN INTEGRATED VIEW

In case of rock art, the cultural context is largely reconstructed by various means, but the situation is different in the sphere of contemporary tribal art which is an integral part of the

culture prevailing in the tribal society. So that, the method of enquiry in case of tribal art is more contextual and subjective in approach. The empirical study on tribal communities and their art primarily concentrated on several interrelated aspects as, art as an element of material culture, the system of training and maintenance of particular art tradition, organizational aspects concerned with continuity of this tradition, the role, significance and meaning of art in proper socio-economic setup, ideas, belief and world view of the tribe in relation to their art etc.

The environment and other cultural preconditions of the tribe has been studied in general. Samples of each artistic depictions or independent units were recorded during tribal art survey in areas of concentration of the particular tribe. Data on the artist and process of execution involved, its clients or users' household and social relevance. All such information were carefully recorded through structured schedules containing open-end questions. The major areas of field enquiry are :

- a. The concept of art existing in the tribal society
- b. The environment and culture setup
- c. The technique and process involved in manufacturing/
execution of artistic embellishments
- d. Raw materials and tools required
- e. Maintenance of the art-tradition and process of training
- f. Social significance of art and art-motifs, purpose,
meaning and organizational interrelationship.

After collection of initial data through interview, being an observer - participant and through genealogical charts, group interview and the structured schedules were filled in. Those were supplemented by exhaustive photographic documentation. During analysis, manageable number of samples were selected at random basis from the entire data. The data on tribal art have been classified, grouped and counted on the basis of morphic categories and theme*. The uniqueness in the experimental methodology opted in this present study has been projected further. In the final stage, a comparative study between the rock art and tribal art of different localities has been made. It has resulted in identification of some common technical features, morphological traits and other variants and diviant types.

The comparative assessment between the rock art and tribal art of several discrete localities has been made with a view to understanding its regional/local identities and to find out which features varies from one area to other.

In case of analysis of the data, both on rock art and tribal art, the frequency pattern and the percentage have been computed. These are mere quantitative assessment. But ultimately these results have further been endeavoured to transcribe in qualitative terms and the integrated assessment has given rise to the interpretations in two major aspects. One, in the area of rock art and tribal art separately. And the other, the integrated interpretation has been

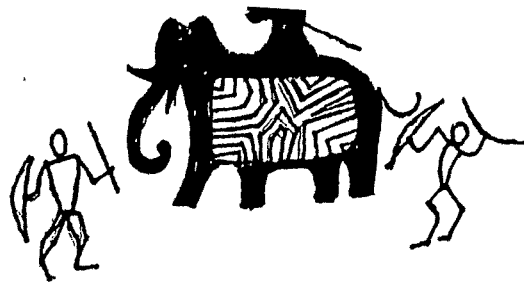
* Both quantitative and qualitative assessments are made on the samples of data on art from each tribal community.

made focussing the attention on the aspect of analogous condition, parallelism, comparative assessments, duality and continuity with variations. The comparative study between early rock art and art of the tribal communities is an unique area of this work which has seldom been carried out by any earlier worker in India involving such a broad canvas.

To begin with, comparison and finally correlations, considering tribal art as the controlled data, ideas and functions on the one hand and the elements of tradition on the other appear to be of great relevance. In interpreting rock art, tribal art has been taken as the guideline. As a matter of fact, many of the reconstructions of rock art have been tuned with practicabilities. The methodology of this nature has been applied by a very few workers who have involved themselves in both the art forms. Above all, this part of methodology has been developed here to a great extent. This work may be taken for finding out the continuum between the art forms, depicted on the rock art of earlier times and the present day ethnographic display of art.

In the application of this method undue ^aexaggeration has always been restricted so that the realities do not turn defunct. In view of the same, greater precautions have been taken so that the logistics are not lost. The application of this methodology with which the data have been collected, discussed in necessary details within the text in appropriate context.

ROCK ART



BEGINNING WITH ROCK ART

To begin with, the discussion on rock art, a few preliminary comments are essential, mainly for the purpose of clarification. The discovery of rock art site in India situated in Gorakhpur of Uttar Pradesh, goes as far back as 1883 made by Cookburn. Later similar works were also conducted in other parts of India. On the basis of the distribution of rock art sites in India, the concentration is observed in Madhya Pradesh. Centering round the same, the peripheral area is provided with scattering of such sites. It may be noted that the adjoining regions in the eastern part is also important with the occurrence of similar sites with close proximity in the overall reproduction of rock art. In this connection additional emphasis is to be laid on two areas, namely Orissa and Bihar. Further away from this region, as in West Bengal and greater Assam, genuine rock art sites have not yet been reported. This, perhaps, indicates that rock art as a distinct trait-complexes of culture was restricted in its distribution upto Orissa and further eastwise migration was ceased. Unless thorough work is carried out, conclusion can seldom be drawn. However, with regard to this region, i.e. easternmost extremity of rock art site, perhaps inconveniences were faced with. At the same time, a parcolation of tradition might have been stopped, obviously for some reasons. Till now, no information are available on the bearer of rock art.

In some of the localities with rock art sites, a few existing tribal groups are practising art either on the wall or wooden planks. Among such tribes with traditional art forms, the worth mentioning groups are the Korkus of Madhya Pradesh, the Juangs of Orissa and Lanjia Saoras of Orissa. These tribal groups are absent from the indigenous setting, crossing the boundary limit of Orissa. It is to be pointed out that the above comment does not imply that the forementioned tribal groups were responsible for rock art. But at the same time, their presence with art tradition, vis-a-vis the occurrence of rock art sites, cannot be set aside. It is still an open question whether there was a kind of continuum between the rock art and the art of some tribal groups.

With the presentation of above mentioned backdrop, the rock art in its holistic form has been presented here. It is also specifically pointed out that instead of considering a number of sites and their amalgam, giving rise to the locality, only representative sites/localities have been taken care of. The selection of the representative locality is not based on random sampling. Instead of the same, higher priority has been given to the localities which depict the maximum characters in undisturbed form. In the present case, the geographical features are found to be associated with the distribution and so also the selected localities of rock art sites. The major geographical elements comprise the position of the localities in terms of latitude and longitude, elevation, broad climatic features, total environmental condition with the inclusion of flora, fauna, rocks and minerals, soil type etc. The discussion on rock art localities in three states (Madhya Pradesh, Orissa and Bihar)

has been dealt with separately. Afterwords, endeavour for comparison has been made. In other words, the treatment is of indifferent nature to begin with and later a synthesis has been attempted in the perspective of comparison and correlation. In the discussion part, the priority ordering has been made from highly concentrated region to the region of lesser density. In following the same scheme, the arrangement turns as Madhya Pradesh, Orissa and Bihar.

PACHMARHI

Location : Pachmarhi is a hill station in Madhya Pradesh ($22^{\circ} 28'$ NL and $28^{\circ} 26'$ EL) located within mountainous range of the Mahadeo hills of Satpuras and situated in an average height of 1000 m. from the sea level. Pachmarhi is connected by road with Piparia, its nearest town and railway station, situated 47 km. north of this place. Bhopal, the capital of Madhya Pradesh is located 195 km. north-west of Pachmarhi. Administratively Pachmarhi is included within Hoshangabad district and since British period it was a cantonment township and now it is an education and training centre of Indian military. Being a popular hill resort in Central Indian Plateau, the scenic beauty and virgin forest tract of the Mahadeo hills area attract tourists round the year. The name Pachmarhi has derived from the word 'Panchmathi' or five huts. Near the township, a small hillock with artificial cave shelters is identified as 'Pandava caves'. As narrated in the local legend, five Pandava brothers (principal characters of great Indian epic - Mahabharata) lived in these caves when they were in exile. But the hillock with rock-cut caves were perhaps the shelters of Buddhist monks. Nothing much is known about the early historical details of Pachmarhi. In

1857 captain J. Forsyth, a lancer, first reported about the area. Afterwards in 1862 Sir Richard Temple - the Chief Commissioner of Hoshangabad started various developmental activities in the region.

Topography : The topographic feature of Pachmarhi is of marked difference from other parts of central Indian plateau. The major peaks of Mahadeo hills are respectively Dhupgarh (1350 m), Mahadeva hill (1328 m) and Chauragarh (1311 m). The peaks are the highest summit of Satpura range in the south of river Narmada. The Pachmarhi plateau within the Mahadeo hills is saucer like in shape and surrounded by peaks. Denwa is the principal river system that flows near the extreme southern boundary of the township. There are numerous rivulets, hill streams, and water falls and due to water action steep gorges, ravines, escarpments, caves and rockshelters are abundant in this area.

Flora and fauna : The forest of Pachmarhi is mixed type of vegetation containing a great variety of species, including rare medicinal plants. The common species are saj (Terminalia tomentosa), tinsa (Ollgeinia dalbergioides), tendu (Diospyros melanoxylon), teak (Tectona grandis), salai (Bosnillia serrala), anjan (Hardwickia binata), sal (Shorea robusta), mango (Mangifera indica), achar (Buchanania latifolia), mohua (Bassia latifolia), bel (Aegla marmelos) and several others.

The major fauna available in the Pachmarhi forest are elephant (Elephas maximus), buffalo (Bos bubalis), bison (Bos gaurus), wild pig (Sus cristatus), black-buck (Antelope cervicapra), swamp deer (Cervus duvanedi), sambhar (Cervus unicolor), chital (Cervus axis).

Among carnivores, wolf (Eanis pallipes), tiger (Felis tigris) and leopard (Felis pardus) are most frequent. Other mammals include Indian sloth bear (Melursus ursinus), Indian squirrel (Sciurus indicus) etc. Varieties of birds are available in the forest of which the pea-fowl (Pavo cristatus) is the most popular game bird. It is apprehended that in future identification of animals and plants may be made possible with precision (Cobbett et.al, 1908).

Korku tribe : The Korkus are considered as indigenous tribal inhabitants of Pachmarhi. Until the beginning of the British occupation in the highland of former Central Province, (present Madhya Pradesh) Korku jagirdar or chieftains were the rulers of this area. At present the Korkus and Gonds are numerically dominant tribal population in the villages of this locality. Caste hindus are not uncommon in those villages but live in separate hemlets, keeping distance from the tribal households.

Geological account : In the present discussion, instead of a cursory look on the rock art area, the relevant part of geological information are to be supplemented. With a view to making clarifications of this idea, it is to be noted that rock art, either in the form of painting or engraving is not found to occur on all types of rocks. On the basis of information already available it appears that in the global perspective sandstone is preferred for the depiction of rock art. This does not mean that any deviation is absolutely devoid of. However, the deflection, if any, is the least. It is not unlikely to comment upon that presence of sandstone, in huge exposed forms, acts as one of the basic preconditions for the production and obviously the occurrence of rock art. In the fore-

noted backdrop, only the important issues related to geological formations and features vis-a-vis rock art have been taken into account.

The three localities namely Pachmarhi hills of Madhya Pradesh, clustering of sites in the Isco village of Hazaribagh district, Bihar and the site Ulap in Sambalpur district of Orissa are contiguous areas. All the localities have a good deal of resemblance in geological features, but at the same time, micro-differences are not absolutely absent. The geological features related to rock art of the total area has been taken together but dissimilarities have also been pointed out. The Pachmarhi hills appear to be a hallmark in rock art both with quantum and exquisite variations.

The central sheet of India is marked by the elevated land surface in the extreme northern part of the peninsular India which extends northward and projecting into southern part of extra-peninsular region. This upland area is placed in the interphase of extra-peninsular and peninsular parts. The region is most elevated in the central part from which it slopes down both on the eastern and western sides. The river Narmada with its source at Amarkantak on the Maikal range moves towards west through a deep and wide valley, formed by the Vindhya range on the north and the Satpura range on the south. The middle course of the Narmada is flowing along the northern flank of the Mahadeo hills. This particular area, centering round the Mahadeo hills, in the south and the extended northern bank of Narmada is the focal area of rock art. It needs to be mentioned that the Mahadeo hills is a larger area

and Pachmarhi hills are placed within the mountainous range. This locale has been selected for the present study as a single composite unit.

The focal area belongs to the Mahadeo series of the upper Gondwana. It is primarily composed of red and yellow sandstones. The Pachmarhi locality is formed of massive Pachmarhi sandstone, placed on a height of about 1150 m. The major part of the area constitute an undulating plateau surrounded by a group of hills.

The comprehensive Gondwana system consists a number of formations and sequentially these are : Archaean, Talchir, Damuda, Pachmarhi stages are provided with a well extended coverage primarily stretching east-west. This geological formation is cut across by the Denwa river. On its left (northern) bank, all the rock art sites under study are situated. Higher concentration of sites is found on the higher elevation and it drops down on the sloped region. This feature might have some relationship for the selection of the site, and the reasons may be : security, isolation, not to be exposed to outsiders and members of other communities and above all the preponderance of rock shelters.

The Pachmarhi sandstones are highly micaceous and rich in ferruginous materials giving rise to brilliant colours of red, yellow and buff shades. The total exposed surface of sandstone is susceptible to weathering of different degrees due to varied mineral constituents. Primarily the rock shelters and so also the caves have been formed by weathering action. In case of the latter, such actions appear to be more complicated. However, the total mass of

the Pachmarhi hills is exposed to weathering action which has resulted in the formation of quite a number of rock shelters. On the other hand, in case of the cave of lesser number, the suitability of its initial position and weathering action are somewhat limited. The rock shelters are generally placed on the escarpment with or without a hanging roof. The artists had the preference of selecting the site of rock painting which bears a hanging roof but in certain cases they were compelled to carryout their works in the exposed wall surface of the hill. After the rock art was made, the hanging roof might have collapsed due to weathering action.

Sen (1949) had studied the geological formation and physical environment of the rock shelters in Pachmarhi and had critically estimated the date of rock paintings as "A few hundred years hence perhaps would effect most of the paintings in the open shelters which are constantly exposed to weathering. It seems to us that the bulk of the paintings especially those in light colours would not be older than a few hundred years" (Sen, 1949 : 42). This is in agreement with the view made by Gordon who opined "none of the Indian rock painting or engraving is of considerable antiquity" (Gordon, 1958 : 98). Sen has refuted the idea of any possible connection between microliths found from excavations of Dorothy Deep rock shelter (Hunter, 1935) and its adjacent painted panels.

In connection with the geological features, the pigments with which the paintings were made can not be excluded. The area itself has complicated geological features with varieties of rocks and minerals on the one hand and the weathering and disintegration on the other. Iron, in the form of iron oxides is one of the important

components. This product has different shades as brown, red, buff with further micro-variations. These oxides are soluble in water and could easily be used as the paint. In case of other shades, lime, also a derivative of limestone. It is surmised that charcoal might have served the purpose of black shade.

As mentioned earlier that the geological feature of the Pachmarhi hills are not distinctly different from the Ulap and Isco rock art sites of Orissa and Bihar respectively (Pascoe, 1964; Wadia, 1919). In fact, the overall geological features of the Pachmarhi locality is well extended eastward and in the same projections, Ulap and Isco sites are situated. However, any micro-distinctions do not affect the conditions of geological background related to rock art specially the wall as the canvas and the other as the pigment.

ROCK ART SITES - PACHMARHI

The majority of the rock art sites in Pachmarhi area are natural rock shelters placed in sandstone hills whereas the spacious caves were seldom utilized for art work. It is also significant from the distribution of the painted rock shelters that within a particular locality a cluster is formed of a series of suitable rock shelters. All the rock shelters were not selected for art activities. This indicates both selection as well as restriction were imposed for art activities. The present worker, during his fieldwork in Pachmarhi, discovered a number of new sites that was named after either of the nearby tributary or any other special landmark or after the name of neighbouring tribal village. The sites like Dorothy Deep, Monte Roza, Jambu Dip, Mahadeo and Maradeo

has been mentioned in earlier reports. For the purpose of wiping out ambiguity, several old and new sites has been renamed by the present worker. Absence of any form of documentation by earlier workers on recording of the sites and their location in the area were the major problems faced by the present worker. However the sites under study are (Fig. 3 & 4):

1. Nimbu Khud - The name indicates gorge (khud) with lemon (nimbu). It is in close proximity of the central market place. Two rock shelters with evidence of paintings are available in the site. The painted rock shelters are just below a steep rock wall of an escarpment (1000m). Both the rock shelters containing few painted motifs are much damaged due to rainwater flow channels and micro-floral colonies. The rock shelters are at a height of 8 m. from the ground (Photo : 2).

The distance between the two rock shelters is about 35 m. and a total number of twelve paintings are discernible there. All paintings are in white and medium in size. Two anthropomorphic figures are holding bow and arrow. Among 6 zoomorphs, 4 are of quadruped mammals, one deer and the other is a bovid. The majority of the motifs are naturalistic (11; 91.67%), except only one stylized anthropomorph. Within a total number of 12 motifs, maximum (10; 83.33%) are solid bodied and only few (2; 16.67%) are stick figures.

2. Hanuman Mandir - The paintings here are located in the medium level of the escarpment in its west facing outer surface. Within total number of 82 motifs available in the site, maximum (42; 51.22%) are anthropomorph with traits of material culture. The other morphic types according to preference of numerical strength are trait of material culture (16; 19.51%), anthropomorph (11; 13.41%), zoomorph (6; 7.32%), non-figurative motif (4; 4.88%), combination of zoomorph, anthropomorph and material trait (2; 2.44%) and zoomorph with phytomorph (1; 1.22%). In terms of the executed style, maximum are block or solid bodied type (55; 67.07%) whereas the stick figure and line drawings are medium in frequency (26; 31.71%) and only one anthropomorphic figure has been represented in contour line.

Here the zoomorph, anthropomorph, phytomorph, trait of material culture and their combinations represent naturalistic figures (78, 95.12%). Majority (64; 78.05%) of paintings are small in size, medium sized figures (17; 20.73%) and large sized figures (1; 1.22%) are relatively few. The maximum motifs are monochrome (80; 97.56%) and bichrome figures are few (2; 2.44%). Majority of monochrome figures are in white (77; 96.25%) and only few (3; 3.75%) are in vermilion. In bichrome motifs, two figures are painted in vermilion red and white colour.

Superimposition of paintings are few (8; 9.76%) in this site. Among zoomorphs bison (1), two horses (2), monkeys (2), and bird (1) are present. Majority of the represented figures are single motifs while a total of seven compositions include arrangement of several figures. These are bison hunting scene (1), battle

scenes (4) and warriors blowing pipe (3). The anthropomorphs, either individual or in combination with material trait and/or zoomorph, represent horse rider holding sword, warriors with bow and arrow, sword, shield, spear and their combinations. Only one human figure is found in posture of beating drum. One sitting figure of a man playing harp-like stringed musical instrument is associated with figure of a women with distinct breast and bun-like coiffure. The weapons like battle axe, bow and bunch of arrows are also represented individually (Photo : 7, 18, 19, 22).

3. Jambudip - This site was explored earlier. It is situated at an elevation of 335 m. with the width of 33.5 m. Sporadic evidence of microlithic fluted core, both geometric and non-geometric, different types of microliths, debitage flakes and potsherds are found on the surface. But the present worker does not relate the lithic elements and the rock art.

Analysis of the total number of 270 motifs available in this site, maximum number of depictions are of anthropomorph with material trait (144; 53.33%), other categories are : zoomorph (49; 18.15%), anthropomorph (37; 13.71%), non-figurative motif (22; 8.15%), zoomorph in combination with anthropomorph and material trait (7; 2.59%), material trait (4, 1.48%), zoomorph with anthropomorph and unidentified figures (both 3; 1.11%) and zoomorph with material trait (1; 0.37%).

Maximum figures are of frontolateral category (130; 48.15%). Zoomorphs are predominately represented in the profile view (61; 22.59%). Out of these, 46 (93.88%) are zoomorph. It was possibly

easier for the artist to represent animal motifs in profile view. Human figures displayed in fronto-lateral view was more effective for the purpose of communication. Only anthropomorph and anthropomorph with material trait is represented in front view.

In Jambudip rock shelter, maximum number (207; 76.67%) of the motifs have block or solid body. Other stylistic categories are stick figure and line drawing (39; 14.44%), contour line (16; 5.93%), hollow-body, partly filled (7; 2.59%) and body filled with pattern (1; 0.37%). Majority of the motifs are naturalistic (241; 89.26%) linear motif, sign etc. (25; 9.26%) and stylized figures (4; 1.48%) are relatively few. In dimension, maximum depictions are small (188; 69.63%) whereas the medium (64; 23.70%) and large (18; 6.67%) sized motifs are lesser. Except three bichrome figures (1.11%) of red and white, majority of the motifs are monochrome (267; 98.89%). Within monochrome category, white (253; 93.70%), pink (10; 3.70%), red (3; 1.11%) and maroon (1; 0.37%) are represented. The paintings depict anthropomorph holding stick/club, sword, spear, shield, bow and arrow, quiver, axe, battle axe, horse riding warriors with weapons, man carrying pole on the shoulder, elephant riding warriors holding weapons etc. (P.R.: 1,2,3,4,7,17 & 18); (Photo: 4,9,14,15,16,20).

4. Dorothy deep - This rock shelter is situated in the north western corner of Pachmarhi town, and about 2 km. further north from Belle View. The rock paintings of this site was initially studied by Gordons (1939-1940) and then Hunter excavated it and successively published one interim report (Hunter, 1935.) followed by a final report (Hunter, 1936).

The fragments of recovered human bones have not been properly studied and so its racial identification is still unknown. According to Khare (1984) the human skeletons recovered from the deposit are of two children and one adult. The racial feature of the skeletons are similar to the indigenous tribal population of the area. Within a total number of 81 motifs in this rock art site, majority (58; 71.60%) are viewed fronto-laterally, Other represented views are : profile (12; 14.81%), unidentified (6; 7.41%), front (4; 4.94%) and front or back (1; 1.23%).

Among morphic forms, the maximum is of anthropomorph and material culture (54; 66.67%), other categories are lower, zoomorph (10; 12.35%), anthropomorph (8; 9.88%), material trait (3; 3.70%), unidentified (2; 2.47%), zoomorph and anthropomorph (1; 1.23%), zoomorph, anthropomorph and material culture (1; 1.23%), and non-figurative motif (1; 1.23%). In style of execution, majority of the motifs are block or solid body (71; 87.65%). Other categories are fewer, including stick figure and line drawing (5; 6.17%), X-ray figure and body filled with pattern (3; 3.70%), contour line (1; 1.23%), and hollow-body, partly filled (1; 1.23%).

Naturalistic figures are preponderant (76; 93.83%) while stylized (3; 3.70%) and linear motif, sign etc are very few (2; 2.47%). Majority of paintings are small (53; 65.43%) and few others are in medium (26; 32.09%) and large (2; 2.47%) categories. The monochrome figures are found in majority (75; 92.59%) and only 6 (7.41%) are bichrome, painted in vermilion red and white.

Most of the human figures are represented as warriors holding weapons, as stick, club, sword, shield and quiver. Archers with bow and arrow motifs are large. Warriors riding horse and elephants and holding weapons are not rare. Combinations of two or several types of weapons are more frequent (P.R. 22).

The zoomorph is represented as elephant (1), horses (2), deer (2), bovid (1), lion (1) and unidentified quadruped (4).

5. Putli Lane - This site is located in the north-eastern side of the Pachmarhi town, in the extreme north of Maradeo hills (900 m.). Out of 29 paintings zoomorphs (14; 48.28%) are maximum while anthropomorph, anthropomorph with material culture and non-figurative motif each of the three categories have 5 (17.24%) motifs each. Zoomorphs (14; 48.28%) are presented in profile view, anthropomorphs in isolation and no combination with material culture are represented fronto-laterally (10; 34.48%). Excepting only few motifs painted in contour line (1, 3.45%) and stick figures (3; 10.34%) in majority of the cases, the style is executed in block or solid body (25; 86.21%). Excepting non-figurative motif (3; 10.34%) all other paintings (26; 89.66%) are naturalistic in type.

In size maximum figures are small (21; 72.41%) and few are medium (8; 27.59%). Superimpositions are not found in the rock paintings and all motifs are monochromic, painted in white colour.

Among zoomorphs, 12 figures are of monkeys and are arranged as a group, in a single row. The other two figures represent a bull and one indistinct painting of a bovid. In anthropomorph with

material trait, three figures are holding bow and arrow, and one figure with bow. The other figure is represented holding a club. Any object of material trait is never found to be represented singly.

6. Bazar shelter - The rock shelter is located in the Jata-shanker hill area on the northern side of the Pachmarhi central bus terminus. A total of 42 paintings have been recorded in this site. Anthropomorphs with material culture (28; 66.67%) are maximum. Other morphic types are of material culture (9; 21.43%), anthropomorphs (2; 4.76%), zoomorphs and anthropomorphs (1; 2.38%), zoomorph, anthropomorph and material trait (1; 2.38%) and non-figurative motif (1; 2.38%). Twentynine (69.05%) motifs are shown in fronto-lateral view, some others (10; 23.81%) in unidentified views, profile (2; 4.76%) and back view (1; 2.38%). There are blocks or solid bodies (33; 78.57%) and stick figures (9; 21.43%). Excepting only one non-figurative motif, all (41; 97.62%) are naturalistic. In dimension, small sized motifs are predominant (28; 66.67%) and medium size motifs are lesser (14; 33.33%). Superimposition is absent in this site. Only monochrome figures including motifs painted in white (34.95%) and red (8; 19.05%) are available. Zoomorphic figures include horses (2). Wide range of human activities are available in the site, as battle scenes (4), group dances (2), other category of anthropomorphs with material trait (22). In addition to above mentioned types of material objects, stick or club (1), basket or pots (7) and unidentified objects (6) are included.

7. Mount Rosa or Monte Rosa - The site is situated in the west of Pachmarhi which is further west of Reech Garh and about 1 km. north from tourist spot, Daisy Khud. A total number of 47 painted motifs have been traced of which maximum types are zoomorph (21; 44.68%) and other forms are : anthropomorphs and material culture (12; 25.53%), phytomorphs (6; 12.77%), anthropomorphs (5; 10.64%), traits of material culture (2; 4.26%) and unidentified (1; 2.13%). In the motifs profile views are maximum (26; 55.32%), fronto-lateral (17; 36.17%) views are medium and front views (3; 6.38%) are the least. Typologically, majority of the motifs (46; 97.87%) are naturalistic and only one unidentified figure remains uncategorised.

Most of paintings are small (24; 51.06%), medium sized paintings are little less (21; 44.68%). The large sized figures are only of zoomorphs (2; 4.26%). In the site superimposition of paintings are few (10; 21.28%). All paintings are on monochrome having preponderance of white colour (37; 78.72%) while use of pink (9; 19.15%) and grey (1; 2.13%) are relatively restricted.

In this site one large figure of a bison painted in red and a large grey colour motif of an elephant showing the inner part of the body filled with linear pattern is significant. In addition, other types of animals represented in the paintings are : unidentified quadrupeds (6), bison (6), cow (4), horses (2) and dog (1). The figure of three cows with a woman close to a hut are observed in a composition representing a household scene. Hunting scenes (2), scenes indicating domestication of animals (2) are also present.

Six phytomorphs represented in the rock art are so much generalized in forms and beyond identification.

8. Mahadeo - The Mahadeo rock shelters are located about 11 km. south of Pachmarhi town. The painted rock shelters are on the hill top of the same range. Two separate rock shelters contain evidences of rock paintings. A total number of 145 motifs are present in two shelters. The anthropomorph and material culture (73; 50.34%) are maximum, and other categories are relatively less, including zoomorph (27; 18.62%), material culture (17; 11.72%), anthropomorph (17; 11.72%), unidentified (6; 4.14%) and phytomorphs (5; 3.45%). The maximum (111; 76.55%) motifs are with fronto-lateral views and others are : unknown category (22; 15.17%), front (10; 6.90%), top view (2; 1.38%).

In terms of style, maximum motifs are block/solid bodied (120; 82.76%) and stick figures (24; 16.55%) are few. One figure (1; 0.69%) represents the body filled with linear pattern. Most of the motifs are naturalistic (139; 95.86%) and all others are probably symbolic in character (6; 4.14%).

In size dimension, maximum figures are small (114; 78.62%), medium-sized motifs (29; 20.00%) and large motifs are few (2; 1.38%). Majority are monochrome motifs (144; 99.31%) painted in white colour, one figure represents anthropomorph with material culture is bichrome, with the use of both red and white colours.

Majority of the figures representing anthropomorph with material culture are of warriors holding different weapons. Those are human figures holding bow and arrow (22), holding sword (8), with only bow

in hand (9), holding shield (2), have quiver (7) and holding spear (1). The other type of figures of this category are - one wounded soldier, struck by arrow and 2 figures represent carrying poles on shoulder (P.R : 6, 9); (Photo : 6, 17, 30).

The other material traits represented singly or in combination with human forms are stick or club and other unidentified objects of material culture.

9. Bainganga - This site is situated on the northern bank of Bainganga nala - a rivulet, 3.5 kms. east of Pachmarhi town. The first rock shelter is on the cliff-top and the second is at the foothill area. The first rock shelter is spacious and the painted wall facing perfect east. In the first rock shelter, a total number of 56 cup marks are arranged in chain like fashion near the rocky floor. Each of the engraved cup marks are shallow and composed of small peck marks. In the first rock shelter, 82 motifs are paintings and 56 are engravings. In the second rock shelter total number of art motifs are only 9 and all are paintings. This is dominated by the non-figurative motifs (58; 39.46%) for the presence of 56 cup marks. The significant morphic forms are as follows : anthropomorph and material culture (51; 34.69%), zoomorph (20; 13.61%) and anthropomorph (11; 7.48%). The minimum frequencies are of zoomorph, anthropomorph and material culture (2; 1.36%), material culture (2; 1.36%), zoomorph and anthropomorph (1; 0.68%) and phytomorph (1; 0.68%). Excepting 58 non-figurative motifs, including large number of cup marks, one object of material trait and one unidentified type of figure present in the site. Majority of 52 motifs

(35.37%) are viewed fronto-laterally, others are of profile views (22; 14.97%), front view (6; 4.08%), front/back view (5; 3.40%) and top view (2; 1.36%).

Stylistically, maximum motifs are block/solid body in type (126; 85.71%) and other categories are : stick figure etc. (12; 8.16%), contour line (5; 3.40%) body partly filled etc. (3; 2.04%) and hollow body partly filled (1; 0.68%). With the figurative motifs, naturalistic (84; 57.14%) figures are maximum and stylised figures are minimum (4; 2.72%). In terms of dimension, majority are small (118; 80.27%), medium (25; 17.01%) and large (4; 2.72%) sized figures are only few. Occurrence of superimposed paintings are few (9; 6.12%) including 5 zoomorphs, 3 anthropomorphs with material culture and one motif representing material trait.

Maximum paintings are monochrome figures (90; 98.90%) painted either in white colour (81; 89.01%) or in grey (9; 9.89%). Only one bichrome figure painted in maroon and white is available in the first rock shelter. All available motifs in the second rock shelter are painted in white. The principal subject matter of the painting in the second rock shelter is of elephant - riding warrior holding flag and armed with lethal weapons. In the first rock shelter, one significant composition of one tiger and a deer facing each other and in between the two, figurative drawing of a tree is present. (P.R.: 8) (Photo : 5, 8, 10, 26).

10. Imli-Khoh - The location of this site is about 1.5 km. south west of Rajat Prapat or big fall. Imli or tamarind trees are most frequent in this part of the forest, so the name is attributed

to it. A significant number of paintings in this site represent bee-hive and flying bees on the branches of tree.

A total number of 269 motifs are painted in the rock shelter and the maximum (120; 44.61%) constitutes anthropomorph with material culture. Other morphic forms are zoomorph (84; 31.23%), anthropomorph (31; 11.52%), material trait (22; 8.18%), non-figurative motif (6; 2.23%), zoomorph and anthropomorph (3; 1.12%); zoomorph, anthropomorph and material trait (2; 0.74%) and phytomorph (1; 0.37%). Depictions of two vultures sitting on the branch of a tree within the battle field suggest the artist's own perception about horror of such feud which is expressed in the visual narrative. A total number of nine motifs are painted in black and use of such colour is only found in this site (P.R. : 10); (Photo : 23, 29).

11. Maradeo - Maradeo or Maradev hills is situated within the range of dense forest on the eastern side of the metal road connecting Pachmarhi and Bariam Pagara. A total number of six painted rock shelters are scattered within about 1 km. radius area. The rock shelters are part of escarpments at an altitude of about 700 m. Two rock shelters contain marking with number given by Archaeological Survey of India. The MD-2 rock shelter is the smallest. But within the short space of the wall of 4.2 sq.m. maximum number of motifs are painted. MD-1 rock shelter is more spacious and the rock wall is much wider with relatively more smooth surface but it contains only 14 motifs in the central part of the rock wall (P.R. : 14, 16, 23); (Photo : 21, 28, 31, 32).

The cluster of 6 painted rock shelters in the Maradeo site represent a total number of 234 motifs of which the frequency and percentage of each morphic types are presented. Anthropomorph with material trait (142; 60.68%), anthropomorph (32; 13.68%), material trait (16; 6.84%); zoomorph (16; 6.84%), non-figurative motif (16; 6.84%), zoomorph, anthropomorph and material trait (4; 1.71%), zoomorph and phytomorph (1; 0.43%), zoomorph and material trait (1; 0.43%), zoomorph, anthropomorph and phytomorph (1; 0.43%) and unidentified motifs (5; 2.14%).

12. Bania Bauri - From Maradeo cluster of six painted rock shelter, only about half kilometer towards east a spacious and large rock shelter with formation of a cave and tunnel inside exist with highest concentration of motifs within Pachmarhi area (321; 16.44%). The rock shelter is also a part of escarpment at an altitude of 700 m. Here beside numerous paintings, one engraving filled with white pigment is present. It is important to note that several big boulders are placed just below the painted surface wherever the rock wall located at a higher level and on the ceiling. It is not unlikely that the boulders were used by the artists as the elevated platform to paint on the upper surface of the wall. In certain areas even the rock crevices were painted by the artists in lying position on the floor. (P.R.: 5) (Photo : 11, 12, 13, 24, 25, 27).

Within a total number of 321 motifs present in the Bania Bauri gallery, the morphic typewise frequencies are : anthropomorph and material trait (137; 42.68%), zoomorph (103; 32.09%), anthropomorph (48; 14.95%), non-figurative motif (19; 5.92%), material trait (4;

1.24%); phytomorph (2; 0.62%), zoomorph, anthropomorph and material trait (1; 0.31%), unidentified motifs (4; 1.25%) and others (3; 0.93%).

13. Ghurnar - The site is located about 8 km. north of Dhupgarh peak. The nearby Ghurnar is a tribal village inhabited by Gond tribe and about half kilometer north west of the village, two painted rock shelters and a cave are located at an altitude of about 900 m. The two rock shelters and the painted gallery of a cave are located within the same hillock at a different height (Photo : 1).

The lowermost rock shelter produces microliths and other flake tools of relatively greater size. The first and second rock shelters that are located in the lower and medium level respectively have limited number of motifs. The cave on the hill top contains maximum concentration of paintings on its walls and even on ceilings in moderate and much higher levels. (P.R : 11, 12, 13, 15, 19, 20, 21).

A total number of 274 paintings are available in this site of which frequency of different morphic types are : zoomorph (119; 43.43%), anthropomorph and material trait (96; 35.04%), anthropomorph (20; 7.30%), zoomorph, anthropomorph and material trait (14; 5.11%), non-figurative motif (11; 4.01%), phytomorph (5; 1.82%), zoomorph and material trait (2; 0.73%), material trait (1; 0.36%), zoomorph and phytomorph (1; 0.36%) and unidentified motifs (5; 1.82%) (Fig. 4).

ANALYSIS AND RESULT

In dealing with the data, covering different aspects of rock art (and also tribal art), with the inclusion of necessary attributes and variables, the quantitative analysis has been carried out. The results of these analysis with regard to respective attribute and the clustering of the same are expected to indicate the quantitative assessment, both in terms of frequency and percentage. This attempt points to the fact that the occurrence of different attributes are variables in the scale of relative comparisons. On the basis of the same, the interpretations have also been attempted. For all practical purposes, such a deal is conclusive in nature because of the corroboration of data in realistic sense with description and discussion of the attributes and variables under consideration have been followed.

Morphic types - In theoretical sense, the major motifs include zoomorph, anthropomorph, phytomorph, traits of material culture, natural objects, and non-figurative motifs. The other issue deserves to be indicated is the combination of motif types, as zoomorph and anthropomorph, zoomorph and phytomorph, zoomorph and material culture and even zoomorph, anthropomorph and material culture. In the inserted table on those motif types have been included which are found to occur. Other motif types, expected to be present either individual or in combination but are not found to occur (as for example, the natural object) have been intentionally excluded (Table 1).

The motif types in the Pachmarhi locality have a total of 1953 samples. These have been attempted to understand in terms of the morphic form. In Pachmarhi locality within a total number of

13 sites studied, maximum number of motifs are paintings (1896; 97.08%) whereas engraving and painting on engraving are few (56; 2.87%) and (1; 0.05%). The major morphic types, as solitary expression are zoomorph (475; 24.32%), phytomorph (21; 1.08%), anthropomorph (231; 11.83%). In case of other motif, the major one is related to traits of material culture (96; 4.92%). Afterwards, there are combination of morphic types, as zoomorph and phytomorph (4; 0.20%), zoomorph and anthropomorph (9; 0.46%), zoomorph and traits of material culture (4; 0.20%). Leaving aside the dual combination, mentioned above, the combination appears to be enhanced with more than two motifs, as zoomorph, anthropomorph and material trait (34; 1.75%), zoomorph, anthropomorph and phytomorph (1; 0.05%). Besides the above types, some of the motifs have been labelled as of non-figurative character. This is the only type of motif which is found in both types - painting (86; 6.14%) and engraving (56; 2.87%). Only one solitary example shows painting on engraving (1; 0.05%). The total of these non-figurative motifs comprising the above nature is 143 (7.32%). There are some motifs which could not be identified and marked as unidentified (27; 1.38%) (P.R. : 24).

On the basis of frequency distribution along with percentage, the maximum motifs are of solitary forms as - zoomorph, anthropomorph, non-figurative motifs and material culture. There is also exception, in case of the combination of anthropomorph and morphic motifs of material culture. Here the frequency is the highest (906; 46.39%). The other diviation is of phytomorph as solitary motif but in the frequency is quite less (21; 1.08%). It is suggested that greater-emphasis was laid on the solitary motif as

with zoomorph and anthropomorph. The emphasis of similar nature is comparatively less in case of motifs of material culture. Plants are not given adequate importance here in rock art. It is not unlikely to conclude that the people responsible for rock art had their central theme on man and animals, not in combination but in form of isolation. Depicting man by man (the artist) may be accounted for in different ways, as the projection of the members of the community or something else. The interpretation makes a diviation with regard to animals. It can not be denied that the term of relationship between man and animals was most close than any other morphic motifs. It also appears that such relationship between man and animals was not appreciably benevolent as evident from the least frequency of the combination between the two. The worker only apprehends that man was, perhaps more dependent on animals. At times, instead of dependency, he might have felt scared.

Views represented - The major views represented primarily in paintings and relatively seldom in engravings includes the following major perspectives : front, back, front/back, profile, front-cum-lateral, top, bottom and unidentified. Out of a total sample of 1953 motifs in Pachmarhi area, the highest number (1025; 52.48%) show-front cum lateral view. Then there is a steep fall and profile view is represented in 468 (23.96%) depictions. Mention may be made that a number of art motifs could not be identified (249; 12.75%). Other views or perspective are too low and among them the frontal view is represented in 161 (8.24%) cases. The frontal cum lateral view appears to be dominant in such representation due to expression of a duality in the perspective, the communication appears

to be clear, without any ambiguity. The profile view, at least in some cases, is more useful for the purpose of meaningful representation of the animals. The volume of the animal body, and the details of a number of organs are well depicted. This conclusion is further confirmed when out of a total of 468 profile views, 427 (91.24%) belong to zoomorph. Frontal-cum-lateral perspectives are found to be dominated in case of complex art works with combinations of morphic types. It is markedly found in case of zoomorph, anthropomorph and material culture (33 out of 34 cases) and anthropomorph with material culture (812 out of 906 cases). Afterall, the selection of the perspective of the art form primarily depends on the contents and compositions and so also the specific form of communication expected to indicate (Table 2)

Direction of motifs - In the present case, the direction does not indicate geographical direction but the direction in terms of left and right of the art object. The right hand side of the viewer represents the left hand direction of the figure and it is followed in the same way in case of other direction. Besides direction towards right and towards left there are motifs which do not indicate any such specific direction - which is termed as - neutral. Out of 1953 samples 1040 (53.25%) and 574 (29.39%) are towards right and left respectively. The rest 339 (17.36%) are of neutral direction. The direction vis-a-vis the morphic types do not show any specific correlation of significance. For all morphic types, direction towards right is always more than its counterpart, towards left. Mention may be made that direction of neutral nature is always

present in case of phytomorph, material culture and non-figurative motif.

With regard to the direction, a number of assumptions may be made as - traditional norm, religious belief etc. and such conclusions are difficult to substantiate with the corroboration of valid data. It is further noted that exact functional implications, either on part of the artist or viewer can seldom be made (Table 3).

Style of execution - Rock paintings have been executed in a number of ways as stick figure or line drawing, block or solid body, outline or contour, hollow body and partly filled, X-ray figure and/or filled with pattern. The above noted types of execution have been correlated with the morphic types in quantitative terms. It is observed that a great majority of the art forms (1556; 79.67%) have been executed in block or solid body. The next priority (283; 14.49%) belongs to stick figures or line drawings. The other styles of execution, as outline or contour (74; 3.79%); hollow body and partly filled (16; 0.82%) and X-ray figures (24; 1.23%) are the least. The question comes why block or solid-bodied figures are numerically most dominant. The logical explanations point to the fact that such figures are more perceptible on part of viewers, thereby the communication is both feasible and favourable. From the artist's point of view, these figures appear to be less complex as the details are devoid of. Such figures may be termed as silhouette figure. Similar explanation fits in with stick figure or line drawings, which served the purpose and function of abstraction and impressionism (Table 4).

Morpho-typological taxonomy - This is expressed in the form of typological execution of rock art with technical application. There are a number of major divisions as - naturalistic, stylized and symbolic, besides the unidentified categories. Out of the total 1953 samples, a great majority (1770; 90.63%) belong to naturalistic form. Compared to the same, the stylized forms are practically least (13; 0.67%). The other form, i.e. symbolic, drawn with linear motif, sign etc. are relatively less (168; 8.60%). There are only 2 unidentified samples. Naturalistic and stylized technicalities are found to be present with zoomorph, anthropomorph and anthropomorph and material trait of culture. It is observed that naturalistic typo-technical skill was used in almost all cases, barring a few examples. Naturalistic typo-technical precision was perhaps easy for the production of art and so also the proper understanding of the same to the viewers (Table 5).

Dimension - The metric variables of the dimension of figures have been classified in three major groups as - large (above 50 cms.), medium (15 - 50 cm.) and small (below 15 cm.). Such dimensional classification has been made on the basis of a test classification carried out on random samples. The dimension has been identified on the basis of the measurement along major axis without any consideration on length or breadth/height.

It is interesting to note that majority of samples (1339; 68.56%) belong to small category. In the medium category there is a shortfall (532; 27.24%), while figures of larger dimension are relatively minimum (82; 4.19%). The distribution of the dimension

is found to follow the same pattern with regard to morphic types. It is further interpreted that there is a greater control and skill required for executing figures of small dimensions compared to medium and large dimensions. It is also apprehended that the viewers were present within the proximal distance from the figure and thereby minimum entropies were absent. It is further presumed that the viewers were close to the art forms and for the same there were special occasions (Table 6).

Superimposition - Superimposition of art motifs has been discussed in different ways. Many a times this has been considered as a parameter for the determination of chrono-cultural and stylistic succession. This statement is not challenged but the time difference in absolute form is still difficult to determine. It is not unlikely that superimposition might have been done intentionally for maintaining taboos related to deleting the art or for the purpose of other specific determination. The only analogy may be drawn from the tribal art of modern times, though the context is slightly different. Out of total 1953 motifs superimposition is absolutely rare (116; 5.94%). Among these the comparatively greater occurrence is in zoomorph (39; 8.21%) while such condition is lacking in majority (436; 91.79%) of the cases. As the frequency of the occurrence of superimposition is too meagre, further discussion appears to be unnecessary. It may be noted that superimposition is rare and so also it is not found in all morphic types. Out of 13 major morphic types, both solitary and in combination, only in 7 cases superimposition has been observed. On the other hand, superimposition is

strictly absent in all other morphic types and appears to be numerically dominant (1837; 94.06%). Presence of superimposition may be thought of as economy of space and so also stylistic experiment. There are some special places of rock canvas which are attractive, convenient and feasible from the point of view of both artists and the viewers. In course of time when the earlier paintings were faded out, other paintings were drawn on the same surface giving rise to superimpositions. Paintings on rock surface can not be completely washed and totally cleaned. It is not unlikely that such attempts were scarcely carried out by later artist groups (Table 7).

Colour scheme - In rock paintings, the colour is essential and variation of shade of a particular colour and use of additional colours are substantiating the expression of art forms. In the region under consideration, there are two major classes - monochrome i.e. painting with single colour (1822; 93.84%) and bichrome, i.e. combination but not adding or mixing of two colours (74; 3.79%).

Monochrome, the dominant colour constitutes any of the following colours - white, grey, red, maroon, vermillion, pink and black. A closer examination of colours show that the major colours are three namely white, red and black. The source of the same may be apprehended from lime or ash, red ocher and charcoal. These materials must have been treated in different ways for the purpose of bringing out shades, permanency of colours and brightness. Materials like bark of the tree and such other objects were used as source materials for preparing colours. This particular aspect may better be understood with the aid of physico-chemical analysis

than speculative imagination. Moreover, such work can be undertaken by experts and specialists (Table 8).

Among the seven major shades, mentioned above, the most dominant colour is white (out of 1822 monochrome samples 1749; 96% of motifs are painted with white colour). The same colour has been utilized for the purpose of painting of all the morphic types. The frequency of the utilization of the same colour depends on the number of morphic types. In many cases, all the morphic types are produced by white colour and this figure comes down to 92.00%, as the lowest limit. When the number of the samples are less than 100%, the respective morphic types were produced by other colours as with zoomorph. This is the only morphic type which has been produced with the utilization of different colours, of course separately, giving rise to monochrome feature. The figure being monochrome, but made of different colour, is found to occur in a number of morphic types as - zoomorph, anthropomorph, phytomorph, trait of material culture and the combination of anthropomorph and material culture.

It may be stated with conviction that in rock paintings, monochrome was most favoured and in majority of the cases, as high as about 96%, white colour was used. As an additional information, the observation of the worker is appended herewith. The grey might have been produced with combination of white and black colour in specific proportions. In cases, the grey colour of the painting appears to be a chemical degeneration of the white pigments due to weathering effects and percolation of water on the painting.

Bichrome - In case of the present rock art (paintings), there are seven major shades. Out of which 42 shades of bichromatic art motif could have been produced. In the bichromatic rock art form, in all cases, invariably white colour has been utilized. The other colour of combinations are either red, vermillion or maroon. In reality, contrast to white - red, vermillion and maroon may better be considered as the different shades of a specific colour. However, white being common in all bichromatic paintings, it is found in all cases. Out of other three shades, namely red, vermillion and maroon, the preponderance of vermillion is maximum (51; 68.92%). There is a sharp decrease in case of red and maroon as the composition of the bichromatic painting. The figures are 16 (21.62%) and 7 (9.46%) respectively. On the whole, the highest frequency of bichromatic forms with the combination of vermillion red and white is found with 51 incidences out of a total 74 (68.92%). In these figures, anthropomorph and material culture are depicted in combination as morphic types. It may further be concluded that the bichromatic painting is never a significant trait either from quantitative or from quantitative point of view. It is to be pointed out that the bichromatic paintings are found to follow a special pattern. The outline of the figure is painted with one colour, out of the four colours already mentioned and the inner part is filled with another colour. There are two explanations of the same. One, the outline was first painted with a colour and later the inner-part was filled with another contrasting colour. Secondly, just the reverse process - a motif was painted in solid form as a block, and afterwards the outer boundary is added with a second colour. Whatever may be the case,

the result does not show much deviation. But from the perspective of technology of art, there may be some differences. To the worker, the second alternative is preferred in which there is hardly any risk factor. It is also significant from this analysis of data that polychrome figures are not found in this area under study (Table 9).

Depiction of zoomorph - A total of 527 rock art motifs depict different species/types of animals. These includes primarily invertebrates like arthropods as spider and bees. Pisces, aves including fowl, peacock, vulture etc. Among the vertebrates, the major forms are porcupine, bovids as cow and bison. There are also deer, horse, elephants and bears. The carnivores include dog, tiger and lion. Monkeys are also found to be depicted. Among all the species of animals, mentioned above, some of them have very low frequency as in case of spider, fish, fowl and porcupine. There are other species of very high incidence ranging from 11 to 149. These species are cow, ox, bison, deer, other quadrupeds, monkey etc. In addition to the same, a few other species have moderate numbers. There are birds, tigers, bears, dogs, lions etc. At this point it is important to note that the identification of animals are very generalized in nature. Appropriate methodology for identification is still lacking. Under the circumstance there is no other alternative. However, in the present circumstance, marked association of animals is found to occur with a variation from as small as a bee (31; 5.88%) to as large an elephant (19; 3.61%). With regard to large - sized animals both herbivores and carnivores are present. On the basis of depictions of rock art forms, it is intrinsically difficult to differ-

entiate between wild and domesticated types. Exceptions are met with in case of the composition in which animals are found with human figures. After all the varieties of animals represented in the rock art clearly indicate the knowledge and perception of man about the animals of the same period. Finally the representations of animals in art forms has been executed with relative precision. This fact shows not only power of observation but also the proximity of the animals with the people responsible for rock art and so also the viewers to whom the message is communicated. On the basis of the available report it has been confirmed that excepting lion, shown in low frequency (4; 0.76%) the rest faunal species are still living in the geographical area under consideration (Table 10).

Material culture - Out of a total number of 1953 samples of rock art, only 96 (4.92%) motifs represent traits of material culture and those are unrelated to others. Within a total number of 96 motifs of material traits a maximum number 56 (58.33%) are bow, arrow and quiver. Thus it may be stated that these 3 types of weapons are intimately related to one another. Again, out of 56 such type of motifs, 29 (30.21%) are of bow, 25 (26.04%) of arrow and only 2 (2.08%) represent bow with quiver. Motif of pot/basket or bowl (14; 14.58%) is also observed. Pot, umbrella and ladder (5 each; 5.21%) are not absent. Other types are stick/club, trap, hut without walls, spear, flag, axe, tent/rock shelter, wooden platform, box like object, and horn or flute like musical instrument (Table 11).

Integrated analysis - The present analysis is not on a single motif, found either in isolation or in association with other objects. Attempt has been made for a visual understanding of the scene expressed in rock art. On the basis of intensive observations a total of 85 scenes have been identified. In one way or other, all these scenes indicate the life style and activities of the concerned people. (Table 12 and 13).

The total number of scene is 85 of which the numerical dominance is found on the battles (32; 37.65%) and hunting scenes (24; 28.24%). These two categories of scenes surpass more than half of the total paintings (56; 65.89%). There is a short-fall in number in case of other sets. However, the second group constitutes three major categories of scenes, as of animal husbandry (7, 8.24%), group dance and musicians (both these scenes have uniform number of 6; 7.05%). Household scenes are further rare (5; 5.90%). In very few cases, collection of honey (3; 3.52%) and use of carrying poles (2; 2.35%) are also represented. All these depictions indicate dynamic activities, including battle and hunting. Activities of daily life are proportionately rare. It may only be interpreted that the members of the community at large are more acquainted with day-to-day activities. Neither hunting nor battle is an activity in proximity to all the members and in both the cases expression is made with regard to courage and chivalry and the feeling of victory and possession.

In the present case all the traits of material culture are observed with man, i.e. anthropomorph with traits of material culture. There are numerous motifs, as holding sword (428), bow and arrow (323), bow (106) arrow (35), quiver (24), shield (325), stick/club (39), axe (10), spear (7). This is further confirmed with other anthropomorphs like horse rider (19) and elephant rider (2). Additional confirmation may be made with the motifs as wounded warriors, stuck with arrows (4) and holding flag (1). In this category, holding of unidentified object (71) and so also holding wheel-shaped object (1) may be included. The total number of above noted motifs is quite high (950). There is appreciable deviation from war scenes specially shown as carrying pole on the shoulder (7), holding umbrella (3), climbing scene (3). Striking differences are met with the case of other motifs as musicians (6) comprising the instruments like flute/horn (3), drum (2), and harp (1). There is a solitary example depicting anthropomorph in the disguise of a lion.

CONCLUSIONS

On the basis of the motifs already discussed, the conclusion which may be formulated cover a number of topical areas. Presence of spear and sword point to the state of developed technology, using iron. In the same circumstance, bows and arrows can not be excluded, rather it turns to be an assemblage. Although if the chronology of the rock painting may be determined by other scientific technique, bow and arrow may be diassociated from sword and spear. Simply the morphic types can scarcely be taken as the crite-

rion for the determination of chronology. Such a huge quantum of traits of material culture with highest proportion of tools and weapons indicate their own involvement with feud. Otherwise they might have witnessed such scenes. However, the former conclusion appears to be more confirmative. It is interesting to note that a diagrammatically opposite scenes of pleasure i.e. insecurity and tension are not totally devoid of. Few motifs comprise the musicians with musical instruments. Scenes of fighting with tools and weapons might have been acted as a stress factor. At the same time, they were not in a position to escape from the situation, probably of compulsion. In such circumstance, the motifs of musical instruments might have played a measure for relaxation, signifying the cultural solidarity prevailed within the society.

On the basis of direct observations by the worker himself in a number of sites in Pachmarhi locality, the rival group with clearcut indication of differences has never been depicted. The reason for the same appears to be unexplained. Albeit, the fighting scenes are observed at times. This may be viewed as the feud between two groups and there is no distinction between the two, at least in terms of the traits of material culture. This suggestive conclusion appears to be more tenable because in such remote areas invasion by other communities placed at long distance is mostly unexpected. On the other hand, inter-group rivalry, centering around various issues, is expected to be quite common.

ISCO

Hazaribagh district is situated approximately in the Central part of Bihar, which comprises the fringe area of the Chhotanagpur plateau. The rock art site, known as Isco, was reported by Mr. Tony Herberd, a Christian missionary. It was further followed by Mr. Bulu Imam - local convenor of INTACH (Indian National Trust for Art and Cultural Heritage). For quite long no information were available both on methodology and technicalities with which the work was carried out. This site was devoid of any detailed information of relevance. The present author explored the area in intensive manner and a concised report of the same was published (Chakraverty, 1996). Herein, a brief and comprehensive account of the site has been included.

In the distribution map of rock art sites in India, the easternmost limit is Ghatsila in the Subarnarekha valley, and it was the only rock art site in Bihar. But in June 1992, rock art site was reported in the Karanpura valley, near Hazaribag. Later Mr. Imam found a series of mounds containing metal slags near the rock art site. A significant number of stone tools were also collected from the locality belonging to Flakes and Flake-Blade elements (Ghosh, 1996). A few evidences of neolithic polished stone tools were recovered from the area of painted rock shelter and adjacent river valleys. The discovery was further accentuated with the discovery of megalithic burials by the present author in Panki Barwadih village about 6 km. west of the rock art site. Lithic tools were collected from new sites - placed on the terraces of the Badamahi river and Ranidaha nala (Photo : 33).

Location and geo-cultural setting

The entire north Karanpura valley is of archaeological importance. The exact location of the rock art site is $23^{\circ}48'$ NL and $85^{\circ}20'$ EL, in Isco village, 30 km. south of Hazaribag town. The village appears to be the gateway for entrance in vast undulating plateau region towards east. Hillocks, with an average height of 425 to 540 m. are further extended towards the east. A fairly dense mixed jungle of sal (Shorea robusta) trees covers the hills.

The Damodar river is about 12 km. south of the rock art site. The Munda and Oraons and other caste groups are the inhabitants of Isco village. The hills in Karanpura plateau is a part of the Gondwana system in the upper part of the Damodar river valley. The hills in Karanpura area are made up of quartzites with huge dome-shaped masses of granite gneiss. The painted rock shelter in Isco village is formed of Sandstone.

Isco is not the only rock art site in the Karanpura region of Hazaribag district. During October to November, 1992 further exploration was carried out by the present author jointly with Mr. B. Imam when two more major rock art shelters were discovered in Satpahar hills near Mandair village adjacent to Garhi valley in the western border-land of Hazaribag district. It is located in further south-west of the Isco site. There is a kind of an association between the two sets of sites (Fig.5 & 6).

In the rock shelters situated in Isco village, under consideration, art is mostly represented in paintings on rock walls. Only two engraved motifs were executed : a complete human figure shown dressed. Most probably it was executed much later in the recent past. The technique adopted for the engraved figure as well as its style does not match with any other paintings. The engraved lines are fresh. A close examination of the incision lines of engraved part has shown that the original colour of the rock is intact and it is without any patination. For the prevailing non-conformities, the engraved human figure is dropped out of the present study. Another engraving is of a simple circle which is quite old and superimposed by paintings.

The painters had intentionally selected the best possible part in the chain of rock shelters. In the painted area, the rock wall is relatively smooth, spacious, wide and protected by a narrow ledge blocking out direct sunlight and other unfavourable climatic effects. In the non-painted part, the surface layer of the rock is more uneven and the composition is coarse-grained.

The painted part in the chain of rock shelters is 50 m. in length at a stretch and it has several segments or sectors. The floor of the rock shelter, immediately below the rock walls, is composed of greyish sandy clay, often mixed with angular fragments of fallen rock and debris. The layer of clay has a thickness between 26 cms. and 60 cms. which overlies massive boulders and large pebbles. The layer of large boulders and pebbles is underlain by the bedrock.

The paintings are to be viewed only on the eastern part of the ridge at a height between 428 and 440 m. This ridge contains several naturally formed rock shelters on the southern bank of a hill stream, the Ranidaha nala. The orientations of the rock shelters is of north to south direction. The average height of the adjacent peaks of hills are from 500 to 570 m. A much higher, smooth and slopped cliff-like exposed bedrock runs parallel to the painted rock shelters. The average distance between the two massive ridges is 4 m.

The open air bedrock which is close to the painted rock shelter on the bank of Ranidaha nala bears cup marks on its surface. One such cup mark has smooth surroundings with a circular border, possibly a grind-stone was fixed in it for husking or for pounding grains of cereals.

ANALYSIS OF MOTIFS

The rock art is available in some particular area within the chain of rock shelters near the Ranidaha nala. The painted part is more or less continuous. The entire canvas on the wall of the rock shelter has been classified into six distinct sectors, as A, B, C, D, E and F. The sector A is located in the northern most limit and sector F in the furthest from it in the southern-corner. Between sectors A and F, the total length of the painted rock canvas is about 30 m. (Fig : 8 & 9).

In the rock shelters, in general the paintings are located on walls above a minimum height of 1.5 m. from the floor. On the other hand the upper limit of painting on the wall of the rock

shelter has an average height of 5.5 m. from its floor. Possibly the painters intentionally selected the middle and upper part of the rock wall for its better preservation. Standing on the present day level of the floor, it is difficult for anyone to paint on the same height without using any platform, ladder and such other accessories. The deposited rock and clay on the floor plain is being eroded relatively fast due to rain and other natural activities. The floor plain of the rock shelter is becoming lower in course of time. As one moves up, the height of the paintings from the floor is gradually increasing. The paintings in the lower level are more indistinct and have considerably faded than the paintings in the medium and upper levels. After a thorough study it has been found that the paintings in the lower part are more damaged due to shallow rock shelters. The lower part is more exposed to sun and rain directly which have accelerated the process of decay of the paintings (Photo: 34,35).

In sector A and B, the paintings are arranged horizontally in linear arrangement. The paintings in A sector are only eight (1.89%). These are arranged in almost in a single row and all the paintings are non-figurative geometric forms, including triangles and squares in dark red. Neither bichrome figures, nor anthropomorphic and zoomorphic forms are present in this sector (P.R.: 26,27).

In sector B, there are 63 (14.89%) painted motifs, arranged in three separate rows in different levels. There are 60 figures of non-figurative type while only 3 figures are anthropomorphs. All the animals are land mammals including single-horned rhinoceros

bovid and sambar species. In this sector, several shallow circular holes or cup marks are on the rock wall which are possibly natural in origin. The painters intentionally drew several parallel lines in red and white along its outer border of the circular marks. At least in one such circular mark, the design was painted in the border line centering the circle forming a floral motif.

There are a total of 33 paintings, in bichrome, with the use of dark red and white colour. Only one motif is painted throughout in white and the remaining 29 monochrome depictions are executed only in dark red. The white pigment used in this painting is not uniform throughout. In some areas white colours considerably been changed the tone into purple and cream. This effect may be accounted for in terms of climatic and other biotic factors. In some areas the growth of microfloral colonies on pigmented areas are also observed.

A maximum number of 181 (43.03%) paintings and one engraving are located in sector C. In this part, the wall of the rockshelter is deep and thus it is relatively well preserved. Herein, the paintings are also available at a height of 2 m. near the ceiling. Compared to the sectors A and B, in sector C the paintings are more vertically arranged. But the paintings are more concentrated in the lower level. In upper level the paintings are well interspaced.

In sector C a maximum number of motifs (165; 90.66%) of the total number of depictions are non-figurative forms. A total of 5 are zoomorphic figures, including two quadruped mammals, and three tortoise like schematic figures. Among mammals, one is distinctly

deer like and the other figures are relatively indistinct, possibly representing a bison or any other type of horned mammal. Majority of total anthropomorphic figures available in this site are located in this sector. One of such anthropomorph measures 40.6 cms. in height and it is the largest painted figure in this sector. All the anthropomorphs are drawn either in front or rear view. The largest figure is of a man which contains only a little detail of the body, including a few fingers in both hands and the genital organs.

In the upper level, two separate paintings contain zoomorphic and anthropomorphic figures respectively which are closed within squares and rectangular boundaries. This is drawn with vertical perspective. On one stick like-simplified form of painting, three quadruped animals are seen within rectangular compartments. The other composition includes one anthropomorphic figure in standing posture which is drawn within a rectangle. The human and animal figures surrounded by four walls possibly represent houses for living. Besides this, one such rectangular object with distinct entrance and several chambers inside it are painted. The figure is possibly representing a house and it is classified under the category of object of material trait. In the same sector two sun motifs with distinct rays are painted which is classified under the category of natural object. Another almost similar concentric circular motif without the rays is available in this sector, which is also classified under the category of natural object. The only engraved figure is of a circle which is also painted in bichrome (P.R.: 28, 29).

In sector C, a majority of 96 (52.75%) paintings are monochrome figures while 85 (46.70%) paintings including one painting on engraving is bichrome. The former figures are all in dark red and not a single motif is exclusively painted in white. The bichrome figures are mostly painted in dark red and white excepting only the lone figure where vermillion and red both are used simultaneously.

A total number of 97 (22.93%) paintings of the total number of motifs enumerated in this site are clustered together in sector D. The forms are mostly non-figurative in type with higher range of variation (P.R.: 30).

At the lower corner one figure of a stylized anthropomorphic body has a circular head. The head is also found to be encircled with rounded petal like motif. The body portion is connected with a circular floral-like form by a narrow neck. There is no sign of limbs. The body seemed to be covered with a designed jacket. Presence of rays all round the body is another feature of the figure. This motif is classified under anthropomorphic figure. Three sun motifs with marks of rays are also available in this sector. A total of 83 (85.57%) motifs in sector D are bichrome in type and painted in dark red and white. Only 14 (14.43%) paintings are monochrome and all of them are dark red.

In sector E, the paintings are relatively ill-preserved and indistinct. A considerable portion of the rock wall and its upper surface layer of the rock containing painting is irretrievable. The maximum use of white colour in combination with dark red is seen in this part. Some of the paintings (39; 9.22%) so far available

of the total number of depictions in the site, 30 (76.92%) are bichrome figures painted in dark red and white whereas only 7 (about 18%) figures are painted in dark red only.

Only zoomorphic figure representing a quadruped mammal with tail is painted in this part. The anterior part of its body including the head is obliterated by time and nature. One such motif and one non-figurative motif resembling a horn is also present in the panel (P.R: 31).

Sector F is the northernmost limit of the painted rock shelters and only 34 (8% of the total) paintings are available in this part. The space occupying the paintings are placed at a much higher level, about 2 m. from the present floor of the rock shelter. Within a total of 34 paintings available in this sector F, 4 figures are zoomorphic and represent figure of tortoise. On the top, painting of a rectangular pattern is present filled with detail linear pattern. This depiction is the largest individual painting within the entire site. Its maximum height is 50.8 cms. and maximum breadth is 88.9 cms. Among a total number of 34 paintings, 19 figures are painted only in dark red and the rest 15 are bichrome in type.

The total number of motifs traced so far in the rock art site are 423 including one motif of painting on engraving. Each individual motif or composition was counted separately. The majority of depictions in the site are non-figurative linear motifs (392; 92.67%) while other morphic forms are relatively few including zoomorphs (14; 3.30%), anthropomorph (7; 1.66%), natural object (7; 1.66%)

whereas material trait (1; 0.24%), zoomorph with material trait (1; 0.24%) and anthropomorph with material trait (1; 0.24%) are the least in frequency (P.R. : 32).

It is interesting to note that few anthropomorphs are more schematic in form whereas the animal figures are relatively more naturalistic in representation. The representations of quadruped figures are all shown in profile. The left side of the animal bodies are being barely visible. The figures are painted in sharp body contour lines and the space within the outline is left empty. The animal body contours are painted either in white outline, or both dark red and white colours are arranged simultaneously, side by side. The represented animals in the rock painting appear to be all wild mammals like Sambar or deer, Indian bison, one horn rhinoceros and few tortoises. The anthropomorphs are mostly filled in red and contour or border lines are drawn in sharp contrasting white pigments. Human figures are all very simple and show front views. Hands, legs and the heads are simply depicted in the painting without any further details. The paintings of wild animals are evidences to show that the painters were well skilled in expressing the movement of such figures. They had intentionally made very simple types of human forms. These forms are without any artifacts in hand. All the figures of tortoises are schematic in form and the figures are filled-in with colour.

Sometimes the natural holes and crevices etc. on rock canvas has carefully pointed out and painted in suitable shapes. The outer margins of the holes were painted in such a manner that it has taken a shape of a solid coloured circle with white border line. Sometimes

the holes were transformed into motifs of flowers. This indicates that the painters were influenced by the natural forms on the rock and they had an open choice for selecting the theme of painting. It also indicates that at least some of the paintings were executed for decorative purpose of sheer aesthetic value. All the paintings are quite old, instead of very recent and in several areas the colour have become indistinct, fade or obliterated due to erosion by rain-water.

The pigments used in the paintings are mostly dark red ochre, white and a few are in vermillion. The pigments were mostly collected from locally available minerals. Even now the villagers collect the same pigments for their use. The majority of the non-figurative motifs are designs closed within rectangles or in squares (47.52% of the total). The other non-figurative motifs that frequent this rock art site are chain like shapes (3.31%); long 'u' shaped linear forms (3.07%); irregular linear graffiti (3.07%); interconnected petal shapes arranged in a row (2.84%); triangular shapes (2.60%); two wavy lines juxtaposed (2.60%); finger-print like whorls (2.36%) and concentric squares (2.36%) etc.

ULAP

Backdrop - In Orissa, the rock art sites are concentrated in the north-west and western districts including Sambalpur, Sundargarh, Kalahandi and only one evidence has recently been reported from Mayurbhanj district in the north-eastern part of the state (Pradhan, 1995). In the north-west borderland, the rock art sites located in Sambalpur and Sundargarh districts are close by the chain of rock art sites in the Raigarh district of Madhya

Pradesh. The hilly tract stretching from Raigarh area to further east in Sambalpur and Sundargarh districts the rock art sites are fairly concentrated. It has revealed from the recent studies (Ghosh and Chakraverty, 1995; Pradhan, 1995) on rock art of Orissa that various types of non-figurative motifs, including wavy pattern criss-cross, zigzag, parallel lines, triangles and rectangular forms and such other idealized types are much common in the entire state. The zoomorphs including both wild and the domesticated species are not rare. Anthropomorphs in various activities such as hunting, archery, horse-riding and battle-scenes are rarely represented in Orissa. The important rock art sites in Orissa are : Gudahandi and Jogimath in Kalahandi district; Manikmoda, several sites with the same or common name as Ushakothi; Tongo and a group of twelve rock shelters of Lekhamoda, in Chhengapahar and Vikramkhola all are within Sundargarh district. The Ulap rock art site which is a representative of the entire area and has been studied for the present undertaking, is located in the northern bordering area of Sambalpur. This site is about 3 km. south-east of Tongopahar. The other newly discovered site in Pakhna Pahar is located near Janda village, about 25 km. west of Rairangpur town, in Mayurbhanj district. The Pakhna Pahar site has only one painting in red ochre representing a completely schematic figure which resemble a human head with a crown on the top. The site has been intensively studied by the present worker but has not been included in the present project.

Location - The rock art site in Ulap ($21^{\circ}52'$ NL : $83^{\circ}50'$ EL) is within the boundary of a village of the same name situated about 7 km. north-west of Belpahar town in Sambalpur district. It is located on a hillock (300 m), and is placed within Vikramkhola reserve forest. The Kharias are the major tribal population living in this locality. The site is located in the western face of the hill tract which is further extended towards the north-west to south-east and the present site is situated almost in the middle. The hilly region has several rain water-channels and neighbouring rivulet is Lilari nala, a tributary of the Ib river, flows about 3.5 kms. west of the rock art site. It is significant to point out that earlier palaeolithic tools embedded in conglomerate have been found by the present author and other team members from the bank of Lilari nala close to the site (Chakraverty et al. 1988-89). For lack of apt data, no linkage is attempted here between the rock art and stone tools.

Geology - Vikramkhola, an important rock shelter which has only inscriptions is located on the other part of the same hill range. The entire hill range is geologically classified under Cuddapah series of older sedimentary rock formation. The rocks are mostly embedded horizontally and occasionally it is folded and faulted. The lower beds in the series consist of red sandstone which is sometimes overlain by clay, clayey shales and limestone in several pockets (Senapati, 1971). The Ulap rock art site was particularly known as the quarry area for abundance of thin red flagstones (fig. 7)

Flora and Fauna - The Vikramkhoh range is thickly wooded with sal (Shorea robusta) and thick bushes of various bamboo types and other shrubs. The other common flora are sahaj (Terminalia tomentosa), arjun (Terminalia arjuna), kendu (Diosphros melanoxylon), teak (Tectona grandis), sisoo or rosewood (Dalbergia latifolia), bahera (Terminalia belerica), kasum (Schleichera trijuga), palas (Butea frondosa) etc. The common type of fauna available in the hill range are elephant, bison, sambar and deer of different species, nilgai, spotted deer, barking deer, four-horned antelope, mouse deer, wild bear, tiger, panther or leopard, sloth bear, hyena, jackal, indian fox, wild dog, jungle cat, mongoose, otter, langur, rhesus monkey, different types of snakes and birds (Senapati, 1971)*

Rock art - The rock shelter including evidences of rock art is extended from east to west direction. The southern face of the red sandstone rock shelter could be observed from foot hill region and from further distant places. The rock art is available in this site in the form of painting, engraving and painting on engraving. In the rock shelter, the art motifs are distributed only on the flat and relatively smooth wall of the rock shelter which is 55 m. long with an average height of 20 m. The art motifs are clustered in five different sectors of the rock shelter and its maximum concentration is at the centre where the ceiling on the top is more wide providing protection to the rock art. In both the western and

*As scientific names of most of the animals have already been given earlier, repetition has been restricted in the present case.

eastern parts, the art motifs are scattered on the stiff rock wall which has practically no covering on the top. In the extreme western corner of the site, one painting represent only the head of a bovid with horns, located about 20 m. above the rock floor. The painted area is inaccessible whereas the rocky wall is protruding and hanging. In the eastern and western part of the site, the cluster of art motifs, either engraved or painted are available within an average height of 2.5 to 4 m. from the nearest rock floor. In the central part, the motifs are more congested and immediate above the floor level (Photo : 3, 36).

Here in the site, numerous holes, cup-marks, of different sizes are arranged on the rock wall. The holes are sometimes fairly deep, about half a meter. At times, the circular outer margin of the holes are painted with band of colour(s). Those holes and shallow cup marks are arranged in a row on a fairly higher level, about 1 m. from the rock floor. It is most probable that the holes and cup marks were natural in origin and later those were further carved for making fairly deep holes on those. Cup marks and distinct grinding holes are also common on the sandstone bedrock floor of the shelter. At least three of such grinding holes have intricately carved outer margin with distinct sharp edges. It is not unlikely that those holes were dug by using metal tools.

It reveals from further examination of the engraved motifs that the motifs were made on smooth surface for which rubbing technique was applied. All the engraved motifs are depicted in contour line and block or solid-bodied figures are completely absent.

On motifs - Out of a total number of 389 motifs, majority (368; 94.60%) are non figurative. Zoomorphs (7; 1.80%) and anthropomorphs (14; 3.60%) are only few in number. Only two anthropomorphs represent the entire body and 12 other engravings delineate carvings of palm of both side of hand. The carvings of palm are of actual size. One of the engraved anthropomorph poses with two raised hands, shown in front view and executed in naturalistic style. The other figure of anthropomorph is painted in stylized form. (Photo : 37, 38).

All 389 motifs can be grouped under large category, above 50 cms. (3; 0.27%); medium sized, 15-50 cms., motifs are maximum (237; 60.93%) and small, below 15 cms. sized motifs are (149; 38.30%) medium in frequency. A total number of 7 motifs representing zoomorphs include one large, naturalistic prominent engraving of a bovid. The other zoomorphs are - one head of a bovid with horns, in naturalistic style, one painted figure of a quadruped, stylized in approach. Four other motifs belong to zoomorph represent circular foot markings of animals with hint of toes.

Non-figurative motif (368; 94.60%) is found to be predominated in the site with maximum (260; 70.65%) paintings, lesser engravings (102; 27.72%) and few (6; 1.63%) are paintings on engraved surface. In non-figurative motifs beehive-like pattern is common, also with criss-cross line, hatchmark, parallelly arranged groups of straight lines and wavy lines, circle, pairs of kidney-shaped motifs, loop-lines, hexagonals, rectangles containing criss-cross lines, concentric circles, semicircles, triangles, petal-like designs, irregular strokes of colour and larger number of broom like motif (62; 16.85% of the total non-figurative motifs).

Analyses of data on colour-scheme conceived and as well as executed by the artists are largely monochrome (250; 64.27%) whereas bichrome motifs are only few (20; 5.14%). In painted motifs, majority are drawn in dark red colour whereas vermilion red and cream colours are few. In bichrome figures, dark red and cream colours were applied which resulted contrasting combinations. There are only few superimposed painted figures on engravings. The figures are designs and of linear forms. These indicates that there was a time gap between the two types of drawings but chronological estimation is not possible due to paucity of reliable information. It is not really known whether one class morphic form is earlier than the other counterpart. The rock surface appears to be smooth but for the granular structure of the rock, the interspaces are provided with minute and shallow pores.

It is assumed that for carvings or engravings, some hard, sharp and pointed objects were used. Exact type of material used for such purpose is yet to be known and identified. It may be suggested that instead of stone, metal objects were probably used. The rock surface which form the canvas is of dull red sandstone and the hardness is of medium grade. The compactness of the grains is also of medium nature.

LOCALITIES COMPARED

In the present work, three localities, viz. Pachmarhi (Madhya Pradesh), Ulap (Orissa), Isco (Bihar) have been studied. The first locality, Pachmarhi, is quite extensive in spatial coverage, and the constituent sites numbering 13. Both Ulap and Isco comprise

locality with single site. It is assumed that most parts of rock art is function oriented, with variations as entertainment, expression for communication, religious beliefs and ideas etc. Naturally the types/forms of rock art along with the frequency of each type point to some special features.

The Pachmarhi locality is composed of 13 sites in which works have been carried out by the present worker. It is proposed to make endeavour on analyses of the data culled from 13 sites, mentioned earlier. The total morphic types are 14 and they may be splitted up into the following categories, as unassociated of single motif. These include animal or zoomorph, plants or phytomorph, human figures or anthropomorph and natural objects. The second category represents the combination of any two of the above mentioned motifs, as zoomorph and anthropomorph, anthropomorph and phytomorph, zoomorph and material culture. In the third category, the combination of multiple motifs, i.e. two morphic types, as zoomorph, anthropomorph and traits of material culture; zoomorph, anthropomorph and phytomorph. There is other category as of non-figurative motifs and the additional motifs which are still unidentified. There is not a single site in which all the 14 morphic categories are found to be present. (Table 14).

Practically the number of morpho-metric type vary from 3 to 11. There are three sites each with the morpho-metric types numbering 6 and 9. It is to be noted that motifs with a combination of anthropomorph and traits of material culture are found in all the 13 sites out of which the percentage frequency is maximum in 10 sites. Somewhat similar is the case with anthropomorph types and such motifs

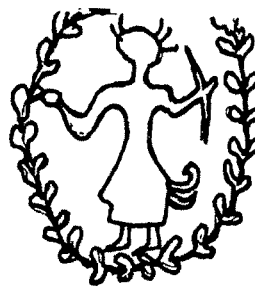
are found to occur in all sites. Only in one site (Nimbu-khud) this morphic type and zoomorphic type is of highest preponderance. Mention may be made that the zoomorphic type is present in 12 sites, excepting Bazar shelter. Non-figurative motif deserves to be mentioned which has the highest incidence only in one site, Bainganga. This variation in morphic types in terms of both number and percentage indicates an overall similarity on the one hand and at the same time dissimilarity is marked among the sites. Out of 14 morphic types, the highest number (906 out of 1953; 46.39%) is of the figures depicting anthropomorph and traits of material culture. In the Pachmarhi locality, the preponderance of this morphic type indicates the representation of their daily life. In all possible ways, the composition of this art is close to the human groups in the locality. There is practically no problem in visualizing the scene of daily life by the artists themselves. At the same time, these scenes are perfectly communicated to the viewers. It is hard to account for the exact reason for the same. But these scenes do not show religious beliefs or supernatural ideas, even the mythical information.

The other part of this analysis is the comprehensive comparison among three localities undertaken in the present work. Both in Ulap and Isco localities, the number of morphic types are significantly less. The numbers are 7 in Isco locality and only 3 in Ulap locality. Between the two localities, the common morphic types are zoomorph and anthropomorph. In Isco locality, the additional motifs are traits of material culture, natural object. Zoomorph with traits of material culture and anthropomorph with traits of material

culture are also present with lesser incidence 1; 0.24% and 14 ; 3.60% respectively. Representation of non-figurative motif is in abundance (average number 380; 98.63%). Non-figurative motifs are in abundance in Ulap and Isco localities and on the contrary the same motif is relatively less in Pachmarhi locality (143; 7.32%). On the basis of close examination it reveals that in the localities placed in Orissa and Bihar, the non-figurative motifs are developed as confirmed from the precision of technique and stylized attributes in the motifs of rock paintings (Table 15 and 16); (P.R.: 25, 33).

In the locality of Pachmarhi, non-figurative motifs are not absent but of lower incidence. These motifs are found to occur in the form of a combination of both developed and less developed art works. The artists in the three localities are different from one another in many ways, probably in terms of ethnic and idealistic forms. The Pachmarhi locality appears to be stupendous with greater areal coverage, number of sites with incidence of paintings, frequency of morphic types and portrayal of a wide range of social activities etc. This area itself also indicates a kind of isolation and so also security due to topography is concerned. Moreover this locality is provided with a long-drawn time perspective. It is further assumed that, may not be the people but the ideas, specially concerned with religion, and supernatural activities, at least a part of culture successively moved in the vicinity areas. This particular situation may be considered as a glaring illustration of cultural diffusion. This specific issue can also be taken in detail manner as a problem of greater importance for future work (Table : 20).

TRIBAL ART



TO START WITH

Tribes may be considered as a special group of people with a number of identities. Albeit, in recent times, a good deal of change has taken place. Among the tribes, there are some special characters and art form is one. It is true that all the tribes do not possess art. It is not yet known the factors responsible either for the presence or absence of art. And herein, no endeavour has been made to tackle the problem. Rock art is the prime area for concentration. In doing so, tribal art has a major role to play. For the purpose of comparison and/or correlation, tribal art has been taken here as the analogous counterpart.

In the present undertaking three tribal groups, viz. the Korkus, Lanjia Saoras and Juangs have been selected. The selection criteria include presence of art, their distribution to rock art localities and some amount of affinities between their art motifs and other attributes related to art and the rock art. In doing so, necessary and relevant information have also been included, but with good deal of restriction so that the focal area of interest may not be displaced.

ON THE KORKUS

An overview - Korkus belong to Kolarian tribe and they have a close affinity with the Mundas of Chhotanagpur plateau. They speak in a distinct dialect of mundari stock. 'Karu' and 'Ku' mean man and plural version, i.e. men. This group is more concentrated in the Satpura plateau region of Madhya Pradesh with greater density in the districts of Hoshangabad and Chhindwara. According to 1981 census the total Korku population in the state was 67,251 including the sub-tribes, viz. Korku, Bopchi and Mawasi. In Hoshangabad district the population enumerated in the 1981 census was 12, 107. The Korkus tribe have several divisions made on the basis of their adoption to Hindu lifestyle and religion (Fuchs, 1988). The traditional forest dwelling section is known as Patharia Korkus.

Village setting - The villages are mostly situated on barren, on rocky and uncultivable land. The houses are arranged in rows in both side of the village road. Generally in Korku villages or hamlets, the shrine of village god Mutua Deo is placed under a sacred grove. The Korku houses are built with wooden posts and the ceiling has a structure made of bamboo poles and thached by grass. The walls of Korku huts are sometimes embellished with decorations and figurative drawings of horse riders, archerer, snake-god and such other motifs. Such wall paintings have become rare in recent times. The traditional art of Korkus that are surviving is carving on stone and wooden platform for preparation of commemorative 'gatha' or memorial post.

Material culture - The material culture of the Korkus is more or less identical to other villagers. The earthen pots, vessels, kitchen-implements made from dried gourd all are available in the

local market. The water-container made from dried gourd is manufactured in the household for their own use. Use of bow and arrow is seldom found in the Korku society (Fuchs, 1988) and instead the tribe is largely user of axes. The axes are used for cutting trees as well as for defensive and offensive purposes. They also use long spear with thin sharp blade.

The musical instruments of Korkus include flutes, kangri or a type of stringed musical instrument. The other type of flute-like instrument consists of a large gourd-shell from which a short bamboo tube is projected. The double-sided cylindrical drum is played during ceremonies and community dance programmes. Small cymbals or manjira, dhak or big drum are other percussion type of musical instruments common to Korku society.

The Korku adult males wear a loincloth and a shirt or short-coat to cover the upper part of the body. They wear turban during festival and ceremonies. A very short loincloth which is only a strip of cloth, covers the private parts between two legs and tied with the belt is also used during cultivation, hunting or collection from the forest. The female Korkus use layenga or a long sheet of cloth which is worn like a loincloth. One end of the cloth also cover the upper part of the body and sometimes to cover the head.

Both man and women mostly use various types of ornaments including ear-rings, finger rings, necklace made of beads, silver and bangles. Korku women are fond of using various types of necklaces. Metal chains, wristlets, nose-pins, anklets and toe-rings are made of brass, silver and other alloy metals. Korku men wear wooden

comp. Both men and women keep their hair long and arrange bun-type of hair-style. Tatooing is also common among Korku women.

Projection backward - An account of the Korku material culture is relevant for making a comparison with the objects of material traits delineated in the early work of rock art, Pachmarhi. The same area is inhabited by the Korkus. The type of shelter, household utensils, weapons, dress and ornaments, musical instrument, dance form and economic activities - such glimpses are documented in the rock art of Pachmarhi.

The Korku women dancers form a long row joining their hands together and such community dances have similarity with similar depictions in the rock art. Some elements of Korku material culture are close to rock art motifs but such similarities does not necessarily mean that the rock art of Pachmarhi was created by the ancestral group of Korkus. The present day Korkus are largely shifting hill cultivators and settled cultivators, but scenes of cultivation or agricultural implements are absent in the rock art of Pachmarhi. The domestication of animals, mainly of cattle that are common in the rock art, have no major significance in contemporary Korku economy excepting use of bullocks and buffalos in farming.

Korkus practise animal husbandary and the principal types are cattle, buffalo, goat, sheep, pig and poultry birds. The dogs are essential to them in the forest habit. Though marginally, they are still practising hunting and food gathering. Sometimes in the Korku memorial pillars and tablets, the figure of the deceased personalities

are shown in association with cattle, goat and such other domesticates. In case of cow herds, such figures are usually represented on the gathas, the wooden memorial pillar.

The Korkus collect forest products in all seasons. They collect plums of the ebony tree (Diospyros melanoxylon), wild mango (Mangifera indica), the berries of the chironji (Buchanania latifolia), bel (Zizybus jujuba), seeds of the sal tree (Shorea robusta), black-berries or jamun (Eugenia jambolana), etc. are edible fruits. Mahua flowers (Bassia latifolia) are collected for preparing liquor and sometimes the flowers are powdered and pasted for preparation of food.

Collection of different varieties of edible roots and tubers, mushroom are common to them. Collection of honey from the forest is a major food resource. The technique for honey collection indicates the application staircases made of ropes from creepers to reach to the beehives. Similar scenes of honey collection is also common in the rock paintings in Pachmarhi.

Korkus are divided into several territorial subgroups and several endogamous divisions or phatries (Fuchs, 1988). Each phatry is again divided into several exogamous clans. Each clan has animal, plant forms or natural objects as totems. Some of the clan and their totems are respectively - Bete, a type of fruit; Dhi - a certain type of plant; Sakom - a leaf of a plant; Barsima or water; Jambu or black-berries; Totha - a corncob of maize; Chilati - the bel fruit (Aegle marmelos); Bushum - a kind of grass; Silm - a tree or bush; Gota - a pebble; Dandil - a rat and Akandi - a pass between the hills (Fuchs, 1988).

FUNERARY CUSTOM AND MEMORIAL POSTS

A few earlier workers (Russel and Hiralal, 1916; Roy, 1936; Chattopadhyay, 1943; Gordon, 1936, 1939, 1940a,b, 1958; Fuchs, 1988) have mentioned about possible analogy between the rock art and the existing art tradition of the Korkus. This art tradition of the Korkus is concerned with socio-religious custom, through celebration of 'sidoli' ceremony, marked by erection of an wooden or stone tablet in memory of the deceased person. The comm^{mo}erative tablets are carved with the figurative delineation of the deceased soul in activities by which his/her identity could be easily represented.

The memorial posts either made of stone or wood is identified by the Korkus as 'gatha' or 'manda' and the art practises are solely related to the final funeral ceremony, 'sidoli' is common in the vicinity areas of Pachmarhi, even with change of nomenclature, as 'japar' in Betul (Roy, 1936).

A detail empirical study has been made by the present author on the tribal group, the ceremony, belief and practices related to the art. Contemporarily, wood is more preferred than stone for making the tablet. These tablets are exclusively made by the Korku themselves, who are never a professional craftsman. Generally any close relative of the deceased or any other clan member living in in the same village, or any local volunteer engaged in the craft of carving. A good deal of skill is required for the craftsmanship. In each village, there are few such selective skilled people. Craftsman is consulted and appointed with great honour by the clan member of the deceased. The carving on the memorial pillar is

considered as an indispensable part of the particular rite and ritual connected with the belief in transmigration of soul. The craft activity is basically purposive, both morphic type of motifs and style is predominantly conventional in form. The particular craft is largely influenced by social custom and conventions.

Usually the Korkus bury their dead body. The burial is in north-south direction, keeping the head towards the north. A few coins are kept on the floor of the pit, and is covered with palas (Butea frondosa) leaves, finally plastered with cow dung. Turmeric and white flour are sprinkled along all sides of the grave. The body is then placed, without any clothes on back. Only a sheet is laid to cover the corpse. Afterwards, the grave is filled with soil and thorny branches of trees are laid on it. The top is covered by soil.

To Korkus, 'sidoli' ceremony is the ultimate ritual and feast when the soul of the deceased is believed to take its final refuge in the afterworld. The preparation of a commemorative tablet is essential during the ceremony. The manufacturing of the memorial tablet is marked by a series of rituals, strict taboos and other observances.

The 'sidoli' ceremony, an expensive one, is arranged on a suitable date, after the lapse of one year. Village priest or Bhumka and Parihar or Shaman fix the date and the mourners consult them in time. Sometimes the Korkus who cannot bear the cost of celebration, arrangement is made in a group, consisting of several deceased members of the same family. On such occasions, on a same

memorial tablet, figures representing several deceased members of a same family are carved. With separate horizontal bands or distinct chambers on the same post, each of the figure is located. The 'sidoli ceremony is the final disposal of the mortal remains of the deceased and it is symbolically performed by the chief mourner and the priest. Then the gatha is prepared and finally carried to the sacred grove where the memorial posts of the same clan members are arranged.

The 'sidoli' ceremony is provided with many details. At the same time, in the preparation of the memorial pillar many of rites and rituals are to be performed. The total issue is a complex and complicated network with the constituents of religious ideas, beliefs and rites on the one hand and socio-cultural matrix on the other. The tribal art in the present case has been juxtaposed with the rock art. In such ideological view point and operational mechanics the art form is more important, at least in terms of analogy. Rites and rituals concerned with funerary custom can seldom be linked between the Korkus (living tradition) and rock art of ancient time.

One point is to be indicated here and that too is with regard to continuity of the art, and associated socio-cultural and religious tradition. Cultural continuity can never be apprehended without interference. This may not be considered unlikely in the total run of cultural tradition, with focus on art, between rock art and tribal art of this locality.

At Pachmarhi, in several Korku villages, the sidoli ceremony continues for three consecutive days and preferably it starts on a tuesday. In the beginning, on the previous day the chief male mourner of the family accompanied with several other senior male members, kin and clan members go to the forest and select a teak tree (Tactona grandis) or salai tree (Boswellia serrata). From the collected wooden log at least one wooden post measuring about 1 m. in height and 25 to 30 cms. in breadth is instantly prepared there. The wooden post is either carried to the house or kept on a suitable mid-built platform within the village. During their return from collection of the log, the chief mourner carry the wooden post on his shoulder and never keep it elsewhere all-through their way during their return. Then the village artist is called who start carving on the wooden post after an initial rite. It is a custom in which the chief mourner on behalf of his family members formally offer the artist a coconut, sindur or vermilion, rice, a bottle of liquor and a token amount of money as his fee for appointing him in manufacturing of the gatha or munda. The carver accept the ritualistic objects and in presence of the village priest, relatives and other assembled guests of the mourner offer flower, unboiled rice, coconuts and vermilion to the post in memory of the deceased person.

In the manufacturing process, majority of the carvers initially draw an outline sketch of the required figures on the wooden post, using a paint commonly prepared from red ochre and water. A twig from a bamboo bush is taken and its one end is chewed so that a brush-like applicator is prepared. After initial outline painting, the next phase for carving is started. An anthropomorphic figure representing on 'ojha' or sorcerer is first carved at the bottom of

the post. According to custom, a small 'dambaru' a special type of small tabar - a musical instrument is hold by the ojha. Korkus believe that prior to initiation of carving on the manda, first the figure of a sorcerer must be prepared at the bottom to appease that malevolent supernatural power. Unless due to wrath of the sorcerer or ojha, the wooden platform may be splitted or get cracked during carving.

In the forest, when the wood was collected to begin with an initial shape is given on the post. Its both sides are smoothened by using chisel. Thus only the figure is projected in relief in contrast to other parts of the surface which is relatively shallow.

In majority of the wooden memorial post, the other type of essential figures at the top are of celestial beings i.e. sun and moon which are considered as the supreme gods to the Korkus. The figure representing the deceased person generally depicted as involved in his own profession and/or signify his social position and sex. As explained by the majority of the Korku craftsmen, in carvings, the figures of women is shown as having a shorter waist and skirt like dress that are always uncommon to the figures of men. The most conventionalized figures representing women are either shown in household activities, scene of animal husbandry, dancing women, etc. The wooden plaque is sometime divided into several parallel horizontal bands or segments, each of which has a distinct borderline. Such memorial tablets denote inclusion of several deceased persons from the same family but located within in seperate enclosures (Photo : 41-44).

Among Korkus, two types of wooden manda or gathas are manufactured. The most common type is 'patia' or thin rectangular wooden plaque, the both sides of which is gradually narrower and more or less converging or arched towards the top (Photo : 47).

The other type is solid pillar-like and square in cross section and its both ends are narrow. Such solid type of Korku funerary pillar is seldom prepared. The mandas are also carved on flat stone pieces. Such stone-made memorial pillars were more common in earlier period. The common figures represent fighting beros, horse-riding warrior, woman in pose of worship of phallic cult of Mahadeva etc. (Photo : 37-40).

It has been observed that among the members of some specific clans of Korku tribe which are Sila, Dhi, Jambu and Chilati motif of the respective plant is sometimes carved on the back side of the wooden 'manda' to represent their totem or emblem to the clan.

Axe, sharp-edged chisel, adze are usual iron tools that the tribal craftsman apply for manufacturing commemorative plaques. Generally the technique adopted by them is block or solid type of figures and are mostly naturalistic in style. The figure of the supreme deities - sun and the moon follow two set of pattern in motifs. One set is more naturalistic while the other is relatively schematic or decorative in nature.

Generally the carving of figures are completed overnight and on the next day the women of the household prepare a small basket made of bamboo strips and seven pieces of stalks of sona or savana type of grass (Ischemum siccatum) is kept on it. Each of the grass measuring the length of a finger. It represent the bones of the

deceased person and in addition to that turmaric and in certain region path of bamboo is also symbolically kept on the basket as bones of the dead. A group of unmarried girls carry the basket containing turmaric and grass and the objects are smeared further with turmaric paste and oil. Rice powder is kept on the basket. Then the so called bones are washed in the river water. Afterwords, the basket is covered by a piece of new cloth and sacrifices are made towards the soul. Soon after the ritual, it is returned to the spot for celebration. The basket as well as the plaque is placed on a platform near the sacred grove of the village.

On the third day, since morning, the rituals and preparation for the great feast continue in full swing. The village shaman offers food and clothes to the memorial-post representing as the effigy of the deceased person or his departed soul. In the ritual, sacrifices of goat and fowl are essential and sometimes the village shaman fall in trance. Being possessed the shaman behave and talk like the deceased person as if the departed soul have re-entered in his body. The family members and near relatives of the deceased ask the departed soul about his wishes and difficulties. The communication through dialogue continues for sometime. Ultimately the chief mourner and all other near relatives start for a procession with drummers and other musicals and a portion of the turmeric believed as bone is immersed in the river or put into a crab hole. The chief mourner carry the wooden post on his shoulder and the procession ends to the spot where the commemorative posts of the clan members are finally placed under a tree (Photo : 45).

During final installation of the memorial tablet, a hole is dug under the sacred tree (mostly a mango or a mahua tree) where the pieces of turmaric representing the bone of the deceased is buried and on it the manda is erected. The abode is considered as the final resting place or abode of the demised soul. Sometime under the canopy of the sacred-tree, a small thached hut is erected to protect the munda from rain.

It is a custom to the Korkus to occasionally visit the sacred abode and to offer bidi (country-made cigar) or tobacco to the manda of their departed near relatives and family members as a mark of respect and rendering protection and blessings from the ancestors.

The above information have been collected through survey among the Korkus in the Pachmarhi area. This is indicative of the fact that among the Korkus, the mortuary parctices is elaborate and at the same time somewhat complex in terms of religious beliefs and ideas. It is still difficult ^{to understand} whether the traditional elements were present earlier. It is assumed that tradition being somewhat conservative in nature, appreciable change in this sector is somewhat unusual. At this juncture it is difficult to project this concept backward in time, with the involvement of the bearers of rock art. Despite this it is an interesting area to make exploration on this problem. It is also conceded that the appropriate methodology is still devoid of. However, it is suggested to make a study on the rock art, especially the motifs related to funeral depictions, and also to explore further on the Korkus, living in different areas, especially in isolation.

ART FORMS

The art works of the Korkus are somewhat unique because these are primarily expressed on the wooden post/plank. At times stones are equally used for the same purpose. In usual and conventional forms, the major morphic types include - zoomorph, phytomorph, anthropomorph, material trait and natural object. In addition to the same, combination of two of forementioned morphic types are found to occur. Non-figurative motifs are not devoid of. The zoomorphs primarily include horse, deer, goat and other quadrupeds, horses are found in majority of the cases (35; 58.33%). This also indicates horse as domesticated animal and this also signifies status symbol. Phytomorph or depiction of plants are comparatively less (7; 11.67%). Anthropomorphs are found in two major forms, namely group dance (11; 18.33%) and man guiding horse-riders (27; 45.00%). Material traits include a number of objects like sword, gun, knife, bow and arrow and so also umbrella, pot, bag, house, drum and spade. Out of these, the preponderance of sword is maximum (32; 52.33%). In addition to the above morphic types, natural objects include supreme god of Korkus - i.e. sun and moon with higher frequency (36; 60.00%), shown in Table 17.

Besides the solitary morphic types, combination of two or more morphic types are not unusual. For example anthropomorphs are found to be associated with material traits. In the same major category, there are sub-categories as - anthropomorph holding weapons in blanket term, also holding sword, knife and even gun. All these objects of material traits are defensive or offensive weapons.

There are other materials which belong to domestic appliances like umbrella, bag, spade, horn, drum etc. It may be mentioned that hunting scenes with bow and arrows are also executed in the art forms. Quite a good number of depictions reveal the figures of sorcerer (ojha) .

The total scenario indicates a kind of situation which may be considered as hunting or fighting scenes. Again, there are other forms which represent the domestic situation. As a matter of fact, there is combination of weapons and domestic appliances in the art forms of the Korkus. Most of such art forms are executed on wooden tablets locally known as gatha . Primarily, these wooden planks with art forms are mostly made for commemorative or memorial purposes and the life style of the concerned persons is shown on the gatha. Naturally, these are not similar to one another. Differences among the same may be made on the basis of the professional activities of person concerned who is dead and whose memory is taken into consideration. A total number of sixty Korku gathas have been analysed of which only eight gathas are carved on stone and others are prepared on wooden planks. The samples have been selected at random from the sacred groves in Mahadeo area, Gond baba park at Pachmarhi and from Pagara village.

The other combination indicates anthropomorph with zoomorph and material traits. The major depictions are horse-riding warriors (35; 58.33%) and scene of animal husbandry (5; 8.33%). In these case the scene of the economic activities and domestic situations are found to be expressed, of course with marked proportional differen-

ces. In case of non-figurative motifs, inscriptions are the main (37; 61.67%). Finally, the total situation appears to be the representation of the integrated life style. There are scenes of warrior and heroes at the same time hunting scene, cultivation, group dance and other form of generalized life pattern are not set aside.

In dealing and analysing the living art, practised by the Korkus - there are a number of special effects. These effects are found to be closely linked with the rock art of Pachmarhi locality on particular, and overall rock art of India, especially in the vicinity areas, in general. A good deal of similarities are met with the forms or motifs and the morphological types. Mention may be made with such motifs as anthropomorph, zoomorph, phytomorph, traits of material culture, including the natural objects and non-figurative motifs. But both the sets, rock art and tribal art represent some differences. This distinction is concerned with the final product. For example, either a morphological type of motif or even a scene depicting a special episode indicate almost the same idea. In spite of the fact, the final production of both the sets indicate that both of them do not belong to the same tradition. In other words, discrete distinction is observed with the holistic art tradition. This pertinent point indicates that between rock and tribal arts a linkage can not be totally be cut off. It is also true that this problem is to be thrashed out in detail, with appropriate data and application of new methodology with the treatment of significance.

THE LANJIA SAORAS

Preliminaries - The Saoras or Savaras are one of the most ancient autochthonous tribal group of India. The term "Savaras" is mentioned in the great Indian epic - Mahabharata and also in Purana and other early sanskrit texts. The tribal group inhabit the forest-clad mountainous region of Eastern Ghat, particularly in Koraput and Ganjam districts in southern Orissa. In the enumerations of Census of India, Saoras are considered as scheduled tribe with various names such as Savar, Saura, Sahara and Saora etc. According to 1981 census, the total Saora population in Orissa was 3,70,060 with their concentration in the districts of Ganjam (69,201), Koraput (45,940) in south and in Sambalpur district (1,07,697) in north Orissa.

Saora dialect, classified under the Austro-Asiatic linguistic group and within southern Mundari family of languages. Linguistically, the Saora(), Kharia() and Juang() dialects are closely related to each other. The Saoras do not have any traditional script of their own and they communicate their ideas through oral tradition.

The Saoras do not belong to a homogenous tribal community and it consists of several endogamous divisions, based on occupational specialization and traditional form of dress and cultural specialization. The principal sub-tribes are - Jati Savara, Arsi Savara, Kindal (or basket maker) Saora, Laura (or blacksmith) Saora, Kumbi (or potter) Saora, Suddha Saora, Jara Savara, Gontra (or bell-metal worker) Saora and Lanjia Saoras. The latter one is the most primitive among all of the above mentioned sub-tribes (Behura and Misra, 1984). Each of the sub-tribes have independent custom and

political authority. Economic and social relations between different sub-tribes are absent and each group functions as independent and closed social unit.

LANJIA SAORA

Broad outline - The Lanjia Saora villages are concentrated in inaccessible forest and mountainous region in Pootasingi area of Gunupur sub-division in Koraput district, also in Serango near Parlakhemundi town. The traditional icon or wall paintings ('idital' or 'anital' is the Saora term for the icon) are relatively more common in Puttasingi area of Gunupur and in Serango.

Flora and fauna - The forest habitat within the mountainous ranges is covered with thick vegetation, predominated by sal,^{*} asana, dharua, mohua, chakunda and nimbu. The underwood species like dahiphula, odasamari, bhuin khajuri are plenty. Bamboo bushes and various creepers are also present there. Among grass, sabai and bagali are the major types. Wild animals are abundant in the forest tract where elephant, tiger, leopard, bear, hyena, jackel, sambar, spotted deer, barking deer, rabbit, rhesus monkey and snakes of different species are not rare.

Village situation - The Saora villages are mostly located on the hillock or rocky wasteland for maximum utilization of cultivable land. The villages are mostly clustered in type and

*The scientific names of the species have already been mentioned earlier in this work and repetition has been avoided.

the houses are arranged in linear fashion on both sides of the village alleys. Each village has several small hamlets mostly inhabited by the families from the same lineage. An average number of about two hundred families live in a village. In every Saora village, on the way towards entrance an earthen platform and a wooden pole erected on it. It contain a thached shed represent 'Bato-devata', 'Tangarsum' and other deities.

The Saora houses are rectangular shaped with considerable height. The Saora houses are mostly single-roomed but more or less spacious while large buildings with several room, long porch and wide courtyard signify that they are economically solvent. The houses are built on raised mud built platform and the walls of the house is made of stone pieces and plastered by red coloured mud. The roof is thached by straw or grass. Inside the room, a wooden platform (3 m. height) is made in the middle on which the agricultural implements and other household equipments are stored. The room is used for sleeping, cooking as well as storing of grains, seed and other agricultural products. The hearth is placed in one corner beside the wall. On the other end, drinking water is stored in earthern pots and kept on a mud-built platform.

The wall near to the mud-built platform for storing earthen pots containing water, is generally selected by the Saoras to paint 'idital' or icons. The icons are generally rectangular in shape and mostly painted in white. To the Saoras, the icons are the seat of their deities and the painted part of the wall is covered by pots, swords and other emblem of tutelaries, baskets with sacred objects, bags containing seeds, dried fruits, vegetables and seeds are overhung on the painted wall. Sometimes more

than one icon is painted side by side on the wall offered to different deities in successive periods. Every year Saoras repaint their wall with red laterite clay but refrain from delineating any part of the icon drawn earlier on the wall. The Saoras do not erase such icons from the wall until those become completely indistinct in natural process. The Saora room is also their cooking place and due to regular smoke and absence of any vent or window in the room, the painting in white colour is soon become damaged and indistinct. During field survey, it has revealed that the Saora icons are tracable on the wall for a maximum period of only five years.

Material culture - The baskets, gourd vessels, clothes, umbrella, bow and arrow, sword, spear and sometimes guns indicating wealthy families all are hang from the ceiling. The houses of wealthy families have wooden doors containing carved figures on it.

The traditional dress of the Saoras are distinctive of their own. The discrete name of the tribe is Lanjia, in Oriya its meaning is 'with tails'. The lower garment of men is like a loin cloth with a hanging piece of cloth in front and at the back which resemble a tail. The end the cloth is embellished with tassels, bright red in colour. Saora women wear short skirt - like wrapped one piece of cloth round the waist which hardly reach the knee. Only during winter season and on occasions when the Saora women visit outside the village, a piece of cloth is winded to cover the upper part of the body. The traditional Saora dress is colourful and made from coarse type of cotton yarn which is woven by 'dom' or a untouchable

scavenger caste living in the same locality. But the yarn is hand-spun by the Saoras themselves. Saora women adorn their body with necklaces made from metal, bead, horn, glass and gunja (a kind of small colourful rounded bead). The necklaces made by arrangement of coins are also most favourite to the Saora ladies. Different types of wooden combs, hair-pins, little rings on alae of nose, metal bangles, spiral metal ear rings etc. are usual ornaments. The most distinctive item of their ornament is the unusually big rounded wooden plugs that hangs from both the ear lobes. The Lanjia Saoras satisfy a major part of their need for material culture by procuring raw materials easily available within the forest and hilly environs. They prepare mats from the palm leaves, manufacture bamboo or cane baskets. Containers and tumblers for drinks made from dried gourd are often decorated with incised figurative design. They extract oil from various edible and non-edible varieties of seeds by employing tree press. The ingenuity of Saoras is also conspicuous in their traditional system, planning and overall total management for terrace hill cultivation. The cultivable land in the mountainous part is uneven and hill-slopes are steep.

Economy - The Saoras are principally cultivators. They practise both shifting hill cultivation and settled-type of cultivation by terracing on the hill-slopes. To Saora language shifting hill cultivation is known as 'Bagadachas' in which each 'Birirda' or families having the same lineage or a common ancestor (Behura and Misra, 1984). In terrace hill cultivation, paddy is the

principal crop, ragi (Eleusine cococana), biri (Phaseolus mungo), kulthi (Dolichos biflorus) are produced in relatively dry field in the upper limit of the hill slopes. In shifting cultivation, the usual types are different varieties of millets and maize.

To the Lanjia Saoras of Gunupur and Seranga area, forest is still a very important source for sustenance. They collect all edible fruits, roots and tubers, honey, timber and fuel from the neighbouring forest. The collected forest products, mostly used for their own consumption and use but mohua (Bassia latifolia) and such other items are also sold in weekly village market. Hunting has become rather a sport than an economic pursuit. The organized form of hunting has become rare and ceremonial in nature. Other than gun (not too often), they use long spear, sword, bow and arrow, battle axe, hatchet for hunting games. Various types of snare and traps are manufactured and employed for catching small animals like hare and birds. A wide range of defensive and offensive type of weapons, other tools and implements related to household jobs as well as of agriculture are well represented in the painted panels of Saora icon or wall paintings either singly (independently) or in combination with other human figures.

Religion - The Saora religion is complex and it is of great interest to the anthropologists for empirical studies (Elwin, 1955; Vitebsky, 1993). The relation between Saora art and religion is major issue of the present work which was initiated earlier by Elwin (1955). Saora Pantheon include a great variety of god and goddesses that they mention in their own language as 'sonum' which are different in nature and there is a distinct hierarchy among the

supernatural beings. The 'Kudanmaran' and 'Kudanboi' respectively the male and female shaman, medicine-man and diviner are called by the villagers for curing diseases. The rank of Kudan is just below the village priest or 'Buyya'. To assist the Kudan, there are other type of shaman called 'Idalmaran' who takes an active role during funeral ceremony and in all 'guar' ritual and feast performed in the village. Both Kudan and Idalmaran perform sympathetic magic but the former is believed to have mastery over detecting the causes of diseases and curing it by supernatural means or sometimes simply by application of herbal medicines, charms, amulets etc. Both Kudan and Idalmaran sacrifice fowl, pig, goat and buffalos to satisfy the deities and other malevolent spirits.

In Saora pattern, beside ⁿinnumerable god and goddesses, the ancestral spirits are also revered as tutelaries. During fieldwork, case studies have shown that majority of the Saora Kudan consider that the soul of either any of their departed parents or any other relative or member of the same family have become the principal guardian spirit. There are a number of deities among the Lanjia Saoras. Each of them has specific status and function. At the same time each deities are worshipped in different period of time with diverse ways.

ART WORK

The idital or icon-paintings are prepared on the inside wall of a room and just below the painting, all the harvested crop is stored in baskets that are piled up on the floor. The field survey was undertaken by the present worker in a total number of 23 Lanjia Saora villages around Pottasingi, and Serango in Koraput and Chan-

dragiri hill areas of Ganjam. It is revealed from the present empirical study that in majority of the Lanjia Saora villages, the icons are prepared for five principal reasons which are : curing of diseases, for initiation rite related to training in shamanism, safe child birth, ensuring a good harvest and associated to name-giving ceremony of both male and female child at an age between two and three years (Photo : 59, 60).

The village Kudan has an important role in suggesting the particular family to paint the icon. Generally the villagers facing any severe problem consult the village Kudan or shaman. Generally Kudan advise villagers to build such an icon. The icon is believed to be the house or resting place of the deity concerned. Shaman, through rites and rituals first identify the deity responsible for such disease or any other form of distress and troubles. Then it is recommended by the Shaman to appoint a 'ittalamaran' or an icon-painter. The painters are men who are specialist artist with experiences for such painting and have inherent supernatural power like a Shaman. On an auspicious day, which is fixed by the Kudan, the painter visit the client's house involved and drink liquor after offering it to the deities. The painter initiate his work almost in trance. He first draw the rectangular outline along the margins of the painting, divide the area into several horizontal segments or bands and completing the entire process then start figurative drawings (Photo : 46).

The paint that the Saora painters mostly use is white which is prepared either from rice-flour or ashes. In Saora language colours are called as 'saibang'. Other than white colour, black is prepared

from charcoal and lamp-black, red colour comes from 'sindur' or vermillion and blue is prepared from indigo powder. The yellowish clay and limestone are available in the hills which are collected by the Saora painters and stored for future use. Maximum number of paintings are executed only in white colour when bichrome and polychrome figures are relatively few (Photo : 61).

Bamboo-brushes are usual type of applicator used by Saora painters. Short, thin bamboo twigs are collected and its one end is chewed or bruised so that it become fibrous. The pigments are mixed with water and some glue made from tamarind seeds is added in it as binding material.

The Saora icons are pictographic representation (Elwin, 1951) for visual narratives. The principal theme of the entire art work is in praise of the deity concerned and it include the scenes of activities from both mortal and unseen supernatural world. The perception of the artist, is largely influenced by existing pattern of belief and normative behaviour, largely practised in the Lanja Saora society. The presence of overall uniformity or pattern in technique and distinctive style of icon painting is evident from presence of certain conventional items and theme. In Saora icon painting hardly any abstract or schematic symbolic motif is found. The entire range of figures are predominately naturalistic in type. The animals and plants type, of tools, weapons and other traits of material culture, human activities and other interactions are mostly restricted within their own spheres of culture and experiences. To

praise a deity, the Saora artist represent the scenes of group dancing with musician in rows, men and women carrying pots and baskets containing various offerings to the deity, animal sacrifices and such other activities that are actually performed in reality. The supernatural beings are represented as anthropomorphs, with multiple heads and hands together.

SAORA ART - SPECIFICATIONS

Broadly, the Saora art presents both precision and artistic sense of higher order. The total number of icons or compositions studied is 60. For the purpose of analysis from the compositions, individual motifs have been segregated. The treatment of this kind is useful with a view to making detailed analysis. The overall feature of the motif in the present case do not deviate much from those of the Juangs and Korkus.

Morphic types representing animals include bee (with beehive), lizard, snake in pairs, peacock, duck, other birds, tiger, hare, group of monkeys. These types are numerically dominant within a range of variation between 21 and 52. In the same category, other unidentified animals may be included. The second group constitutes scorpion, pair of bullocks, bison, deer, dog and bear, the number varies between 11 and 18. In the third category the number decrease further. These are tortoise, fish and crocodile, number varies between 3 and 6. There are other animal species which are closely related to other morphic types.

The inclusion of so many animals, both wild and domesticated points to the fact that the Saoras were exposed to a variety of animal species, both malevolent and benevolent. Selection of the samples may be explained as their usual hunts and food items and so also several other useful species. Some other elements may be viewed to indicate fear complex. It is not unlikely that within so many animals, some of them are connected with religion and even supernatural belief. Appropriate example in this regard may be illustrated from lizard which is viewed as the favourite seat of 'Eldasum' - the benevolent deity. Another indication is of snakes in pair, showing copulating scene. This is considered for fertility and as good omen. Some animal figures might have possible connection with clan. This issue is to ^{be} explored in future.

The phytomorphic types also include a large variety of flora. Unlike animals, identification of plants are not only extremely difficult but practically impossible. Under such circumstance, all the plants (41) have been lumped together. The only exception is of 'shalpa' tree or Sago-palm (Caryota urcus). This tree has an important position. The sap of this tree is collected for preparing liquor which is offered to the deity and consumed by villagers during festivities. In course of the field investigation, it has been observed that the artist always perform the art work only after drinking the same liquor. In other words, this tree (shalpa) is closely associated with their culture, specially in the vista of art work and its association with religion (Photo : 55-58)

The major anthropomorphs include copulating human pair, supernatural being with anthropomorphic representation with multiple hands or heads, group dances, patient and treatment. Among them group dancing is performed to pay respect to the supernatural deities, and such figures are present. With treatment, as found in art work, there is a close connection of sympathetic magic. In the analysis and the results thereof, it is observed that majority of anthropomorphic types are directly related to religious or supernatural activities. Projection of daily life in their art work is not very conspicuous.

The traits of material culture are also shown in their art and the number is reasonable, varies between 12 and 56. The major traits comprise three groups. The first group is on tools and weapons as sword, bow and arrow, shield, gun and spear. The traits of second group are used in daily life, as comb, umbrella, carrying pole and earthen pot. The third group constitutes objects of performing art, as flute, horn and drum.

In the combination of morphic types, human figures with material trait is an important issue. The common scenes are group of musicians, people carrying pots, baskets and poles on the shoulder. There are various scenes, as group of soldiers holding guns and other lethal weapons. Human figures with chair and table in pose of writing, men holding bow and arrow, women carrying pot on head, persons riding bicycles, bus, train and aircraft with passengers, person carried by palanquin bearers. In the art work, the mode of conveyance of the supernatural witch doctors are shown

in different forms. It may also be said that the imagination of the Saoras are neither too abstract nor very unrealistic, rather concerned with the basic human realities.

The other combination is a three-fold unit in which anthropomorph, zoomorph are associated with the material traits. The depiction includes various scenes of daily life as ploughing, elephant and horse riders holding umbrella; hunting of animals including sacrifice of animals. Elephant and horse riders carrying weapons are present in some depictions. In all cases, any major diversion is not met with from their own life style. The god and goddesses are not behaving in a way which may be considered as supernatural. But their strength and power are not like human beings, but purely supernatural. In addition to the above morphic types, the other category is natural objects, comprising sun, moon and stars. The incidence of moon and star is lesser than the sun. These natural objects have not escaped their attention and these are also reflected in their art work. Besides the morphic type, as figures of man (including woman), animals, plants, natural objects, in isolation or in combination, the decorative motif appears to be special character of identity ^{for} Saora art. Their art reflexes both ideas and decorations, and both the issues have the characters of identity. Exactly similar attributes are not found to be present in the rock art through superficial glance. But an intensive look in the rock art does not deny such characters. the points of identity as well as the special features expressed in art form may be of great use for future work.

ART OF THE JUANGS

Foreward - The Juangs belong to indigenous tribal population in north Orissa. Their distribution is more or less restricted within a particular geo-environmental area. According to 1981 census districtwise distribution of the Juang population indicates that the tribe is particularly found to be concentrated in Keonjhar and Dhenkanal districts of north Orissa. According to 1981 census report, the total Juang population is 30,876 of which 50.09% is living in Keonjhar district. Its neighbouring areas of Dhenkanal district is inhabited by 47.20% of the total Juang population.

In the 1981 census figure in Orissa total Juang population was 30,876 whereas in 1941 census, i.e. forty years back, it was only 17,032. The earliest census report in 1891 indicate further lower figure. From the census data on population, it show that the numerical strength of this tribe is making a steady increase within last hundred years.

Gonasika (meaning nostril of the cow), the source region of Baitarani river is considered as the sacred cradle of the Juang tribe. It is located on the upper hills (96 m.) and is about 10 kms. south-west of Kendujhargarh township. In Juang myth, Gonasika is considered as the place where they had their origin and multiplied from their early mythical ancestors - Rusi and Rusini.

Habitat - Juangs are forest dwellers and they are much dependent on collecting food, fodder, wooden log, bamboo and thatching grass for building their cottages. The common forest products are

roots and tubers, certain edible insects, mushrooms, fruits including figs, kendu, jackfruit, mango, mohua flowers, jamun etc. Collection of honey is usual in all Juang household. Liquor is produced from mohua flowers. They eat the fleshy part of mango and also use the kernel of the mango seeds for preparation of food. The forest is also the source to Juangs for collection of fuel, building materials, medicinal plants and herbs, resin, lac and bamboo. Such forest products are utilized both for their own purpose and for selling in the local market. Bamboos are used for making baskets and from palm leaves they prepare mats. The Juang villages are mostly habited by the members of a single clan and the huts are more or less clustered and arranged in linear arrangements on both sides of the principal village alley. The location of the villages is more or less dispersed in type and the village is bounded by cultivable field. The Juang huts have a single room for all activities such as storing of food, cereals, seed and all implements of the household. The huts are made of logs of wood and walls are mud-plastered and thached by a sinkunda - a kind of wild grass. The houses are erected on mud-built platforms. The single roomed huts are used as store room, bedroom, kitchen and a separate wooden structure for cattle pen or for rearing pigs is attached to each hut. Cows, pigs and fowls are the major domesticated animals. The Juang huts are generally without any window and doors.

Two types of cultivation prevail simultaneously among them. The land on the hilltop (taila) scheduled for shifting hill cultivation (poddo). The taila land is acquired and remain under the control of the village council and each family has a right to share a plot of land for shifting cultivation for not more than

two successive years. Afterwards, all the firmland is abundant and the villagers select another suitable hill to continue cultivation. In the beginning; the forest is cleared through slash and burn process, followed by rigorous turning of soil and ultimately the forest land become cultivable. For settled type of cultivation, the land is mostly concentrated in valleys, surrounding the village. The agricultural implements are locally built and crude in type. In shifting hill cultivation, different types of corn, niger, millet, ragi, maize and paddy are usually produced, and in settled type of cultivation paddy is most common.

Society - The 'mandaghar' or 'darbar', i.e. the village dormitory, is centrally located within each village. The considerably large wooden structure has wall on three sides and other side remain open. The village dormitory has distinctive rules, regulations and functions.

The Juang society has two broad divisions namely Thaniya and Bhagudia. The former is those who inhabit in Juang pirh area and in its neighbourhood. They are considered as ritually more pure whereas the latter division is considered as the successors of the branch of Juang tribe who had been excommunicated in the bygone days. The society has several exogamous clans and each clan is totemic in origin and mostly named after different plant, cereals and food, natural object, birds and other animals, mosquito, bee, dove, other birds, bear, wild bear, elephant, dog, fox and tigress. The natural object such as hailstone is also the symbol of a parti-

cular clan. The plant or plant products as clan symbols, are of trees available in the forest tract. Tobacco flower, paddy, mushroom of several types and palm tree (Elwin, 1948; Patnaik, 1989b) are common totem to the tribal group.

Religion - To the Juangs, the supreme deities are Dharam deota or sun god and Basumata or the earth goddess. Both the deities are represented by stones on the peak of the hills. Besides the supreme deities there are several village gods and goddesses of which Gramsiri is the principal patron deity of the village. In front of their dormitory, a sacred grove under a particular tree is believed to be the abode of village deities. In the sacred grove an wooden post similar to the figure of a cross and often carved on it represents an abstract form of anthropomorph. The wooden figure is the icon of "Gramsiri whereas Thakurani, Mahaprabhu, Basuki mata, Dharti mata or mother goddesses and other minor deities are represented by stone boulders and pebbles. The Dehuri and Baita, the village priests, during ceremonies and rites and rituals offer mohua liquor, unboiled rice and sacrifice fowl towards the deities to appease them for favour and rendering benefit to villagers. During podu cultivation the villagers participate in offering to the deity. (Photo : 48)

The community dance programmes are mostly organized by the village dormitory and their members. In Juang society dormitory is an important institution in which all villagers of different age groups have specific role to play. Earlier in each Juang village two bachelor dormitories, prevailed side by side one for men and the other for women. At present, due to changing ideas and cultural

contact, 'dhangri basa' or female dormitory institution has mostly been abolished. The 'mandaghar' or dormitories are the principal centre of the village youth organization and also an institution for economic, ritualistic, dance training and different activities of various nature.

ART FORMS

In Keonjhar district a total number of 18 villages have been explored in intensive manner for studying the art. The villages studied are mostly concentrated in the Juang pirh area in and around the sacred mountain at Gonasika. The Juang art and sense of aesthetics are largely represented in their dormitory art, carving on comb and body decoration by tattoo^oing. The dormitory art is mostly common in the forest ~~belong~~ and isolated Juang-pirh area where relief and occasionally paintings cherish the mud plastered walls and wood carvings are frequent on wooden pillars and other structural parts of the dormitory. Decoration of the body by ^ttattooing is common among aged women and is less attractive to the younger generation.

The wooden and bamboo made combs are superb craftsmanship of the Juang men and sometimes human and animal figures and other decorative motifs are incised on the combs. Hunting scene, group dancing, musicians, fish and floral motif are commonly found to be carved on combs. To them, combs are symbol of love and affection. During courtship the boys present his beloved a suitable designed comb to convey his proposal to become more intimate. The young dormitory members are trained by elders in the art of manufacturing

combs. With sharp knife, chisel, and axe, the expert Juang craftsman prepares wooden combs and carve intricate figures and designs. Through time and continuous training this art work undergoes through evolution. The process of training involved in the particular tribal craft is intimately related to dormitory system. Thus the sustenance of the artistic tradition is largely dependent on the social organization of the tribe. Carvings on the wooden plank of the door are special features of art work. Elephant, horse rider, floral motifs, ornamental emblem representing sun, and other figures of men and animals are usually depicted on doors and ceilings in the dormitory. (Photo : 49-51)

Clay relief is the other common form of expression of artistic skill among the Juangs. During festivities and other occasions, as renovation, clay figurines are made on the wall of the dormitory. Other than their mythological ancestral figurines, horse riding hero - the mythological cult figures, series of other animal and human figures are represented in the low bas relief. Mostly all of the figures are solid bodied, more naturalistic rather than stylized or schematic in form. Detailing of the figure is largely absent and mostly generalized in appearance.

STUDY ON MOTIFS

In the present study, a total number of 162 samples of art motifs including clay bas relief and wood carving have been analysed for understanding the common features and purposes of Juang art. The morphic types have five major components namely zoomorph,

phytomorph, anthropomorph, material trait and natural objects. The incidence of population samples of each morphic types also tallies with the forementioned arrangement. There are combined morphic types as anthropomorph with material trait and anthropomorph with zoomorph. In zoomorphic types there are the figures of different animals which can be easily identified. The animals comprise fish, peacock, other birds, crocodile, goat, tiger, ox/bull, deer, horse, elephant and a very few unidentified quadrupeds. The above figures indicate that the artists had the acquaintance with varieties of terrestrial animals. Proportional higher frequency (10-11) is observed with fish and elephant. Figures of crocodile and goat are seldom (1) executed. The other animals are ranging between 3 and 6. This quantitative difference does not indicate the variability in the demography of respective animals. Some of the animals are closer to their cultural milieu and similarly a few others are set at a distance. These animals are found to be present within the area. Exception is met with in the crocodile. There is probability of explaining the same with the help of their own traditional mythology.

Phytomorph is the second morphic type and very interestingly it is overwhelmingly dominated by flower motif (29) compared to plants. Unlike animals the depiction of plant figure with marks of specific identity is utterly difficult. An artist wanted to draw a specific plant but if the expression turned different, the total function would have been lost both for the artist and for the viewers. This may be one of the reasons for restriction of

plant motifs. There may also be other factors which is still unexplained. Flowers are exquisitely produced in art forms. In case of flowering plants, maximum attention is paid to flowers, for beauty, aesthetics, love and so also religious performance.

Anthropomorph has an obvious connection with human beings, irrespective of space and time. Like many other communities, among the Juangs, gods and goddesses are represented in anthropomorphs. Naturally in most of the cases it is difficult to differentiate between the gods and goddesses and men and women. This particular problem may be solved on the basis of the information received from the members of the Juang community in general and the artists in particular. There are only three anthropomorphic types, as woman with child, motif of female breast, elephant-headed human figure. Mention may be made that other instances of anthropomorphs associated with material traits probably have a closer linkage with religion. (Photo : 52,53)

Material traits are often displayed in art work. The major traits are club/stick, knife, axe, bow and arrow, tobacco-pipe, (earthen) and flute. There is not much conspicuous variation concerned with number. Natural objects have also been depicted in art work. In all five cases, both sun and moon are found to be associated. This is another indication of religious expression in their art forms.

One of the combined morphic types includes anthropomorph with material trait, i.e. man is holding something, as stick/club, knife, axe, bow and arrow. These figurines may be accounted for

at least in two ways. First, in majority of the cases, the god, according to their traditional belief is holding an weapon. Analogous figures or icons are also met with the Hindu gods and goddesses. Secondly, the material traits showing weapons is the display of their power and action and reactions with some other animals or with other human groups, serving the purpose of defence and offence. Expression of their life-style is also observed in other art forms.

The next combination of art form is anthropomorph and zoomorph. There are only two motifs - horse rider (4) and elephant rider (1). This may be a hunting scene or a scene of warfare. But the greater number of horse rider is at par with the common occurrence and utilization of horse in relatively greater number than elephant. To them, these figures have religious significance. On the basis of the stage-wise explanation, an integrated account may be set forth. It appears that among the Juangs, in art form there is the preponderance of naturalistic form than abstraction. Moreover, their art depicts their daily life with higher weightage to ideas concerned with supernatural and religion. (Photo : 54)

TRIBAL ART : A SUMMATION

For the purpose of comprehension on the motifs displayed in the tribal art, of the Juangs, Korkus and Lanjia Saoras representative samples have been taken. Total samples constitute 98 art motifs elements, taken in splitter form. The main morphic types are animals (23), plants (4), human beings (11), material traits (18), natural objects (4) and non-figurative forms (2). The combined morphic types include human figures and traits of material culture

(27), animals and traits of material culture (9). The detail list of morphic type of art has been computed in detail. The analysis has been made from different perspectives and the results are shown with necessary explanation (Table 17).

There are eight major morphic types of art found to be represented, with variation, among the three tribal groups under consideration. Out of these eight morphic types, all of them are found to be present both among the Korkus and Saoras. One morphic type is found to fall short of, i.e. seven morphic types, among the Juangs. Again, in the number of art forms represented, as per morphic types, the number of incidence is 60, 34 and 34 in case of the Saoras, Korkus and Juangs art respectively. In terms of numerical dominance of morphic types it is highest with the representation of animals among the Saoras and Juangs. With the Korkus, the dominant morphic type of art is the combination of human figures and trait(s) of material culture. On the other hand, the second in the priority ordering goes to human figures, associated with material traits both among the Saoras and the Juangs.

In addition to the same, only traits of material culture is found to be placed as the second priority order among the Juang and the same trend is found to be followed among the Korkus. The third position with the Juangs, Korkus and Saoras is of human beings, animal and human figures associate with material traits respectively. Further elaboration in this regard does not appear to be necessary. Lower incidence is found with natural objects, natural objects and plants, and non-figurative motif among the Juangs, Korkus and Saoras respectively.

It may be concluded that with respect to broad morphological types of art forms, there is close similarity among the three tribal groups taken into account. But there is some amount of difference with selection of specific morphic types. It is true that with further splitting of the morphic types with specific identification, a good deal of variation is made within a total of 23 identifiable zoomorphic types. The incidences are 19 among the Saoras, 11 among the Juangs and 4 among the Korkus. Phytomorphic types are very few among them, Juangs (2), Korku (1) and Saora (2). Anthropomorphic types have been further classified into subunits and the respective number of the sub-morphic types among the Juangs, Korkus, and Saoras are 4, 2 and 5. Traits of material culture have been shown to be displayed through 18 forms of depictions, out of which the numbers of sub-types are 12, 11 and 7 respectively among the Saoras, Korkus and Juangs.

The combined morphic types as anthropomorph with material trait surpasses all other morpho-typological classes. Out of a total of 27 sub-morphic types, the numbers are 73, 12, and 7 among the Saoras, Korkus and Juangs. When the three morphic types are found to be integrated in the composition of art forms, the number goes down to 9 and the respective figures are 6 (Saoras), 2 (Korkus), 2 (Juangs). The sub-morphic types representing material objects are only 4 and the distribution indicates 4 among the Saoras and one each with the Juangs and Korkus. Non-figurative motif is found to be indicated in two forms, namely decoration and inscription. The former and the later sub-types are found one each with the Korkus and the Saoras.

Out of a total of 98 sub-morphic types, belong to 8 major morphic types, there are instances of common occurrence of 4 sub-morphic types among all the three tribes, viz. the Juangs, Korkus and Saoras. These are deer, bow and arrow, women with pot on head and sun and moon. The second combination is dealt with the simultaneous presence of nine sub-morphic types found to occur among the Juangs and Saoras. These are reflected in the form of fish, crocodile, peacock, other birds, bull/ox, tiger, axe, flute, horn, earthen pot, human figure with tools/weapons.

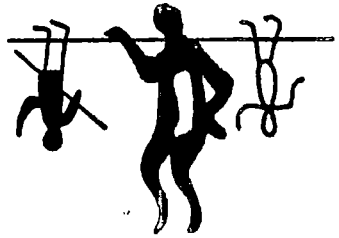
The third category of pairing is between the Juangs and Korkus. Three common sub-morphic types are horse, goat and knife. Finally, the fourth category of common combined sub-morphic types are found among the Korkus and Saoras. These are group dance, tree/plants of unidentified nature, umbrella, gun, sword, and drum, i.e. six submorphic types.

The distribution of the Juangs and Saoras are placed within political/administrative division of Orissa. On the other hand Korkus are living in Madhya Pradesh. Again the Saoras are placed relatively closer to both the Juangs and the Korkus, while the distance between the habitation of the Korkus and Juangs is the highest. The distance in the present case is provided with two major implications. One, the overall geo-environment with the inclusion of flora and fauna which constitute a major portion of art forms. Secondly, the other factor being equal distance has an important bearing with respect to cultural diffusion. This logical hypothesis is found to be compatible in connection with the common sub-morphic

types of art works. The common sub-morphic types are 10, 6 and 3 in case of the Juangs and the Saoras, the Saoras and the Korkus and the Korkus and Juangs respectively. Relatively greater common affinity is met with the Saoras on the one hand and Juangs or the Korkus on the other. Such affinity is least between the Korkus and The Juangs. This result indicates that the location of the tribe and its proximity with other tribes can not be ignored from the point of view of diffusion. This hypothesis is found to be substantiated with the similarities in art motifs.

Each site, either of rock art or tribal art, is provided with its own identity. A number of sites taken together give rise to locality. With each locality there are some special features, along with commonness. Above all, all the localities, both of rock art and tribal art point to similarities as well as differences. Similarities found to prevail to a comparatively great extent in case of rock art and the same trend is found to follow with tribal art. However, distinctions are markedly observed between the art motifs of rock art and tribal art. In this scheme, a broad and tentative frame of chronology may be set. Absolutely modern trait is not found in rock art but the presence of the same is observed in tribal art. On the basis of the data on motifs and their depiction, both in isolation and association, it may be said that in the milieu of art form there is a kind of continuity, even may not be smooth, and thereby the total perspective may be viewed as of one tradition which continued through time and gave rise to change, instead of interruption.

SUMMARY AND CONCLUSION



In any work, specially connected with Ph.D. dissertation, there is a style in the total framework. For all practical purposes the initiation is made with introduction and the presentation comes to an end with summary and conclusion. In the present case, no deviation is made from the traditional way. The present chapter is the ultimate part of the work which deals with summary and conclusion. It is to be noted that the summary is a synoptic expression of the total work while the conclusion, at least in the present case, is more of a comprehension.

SUMMING UP

The total work has been arranged in six major parts, namely Introduction, Earlier works, the Problem, Methodology, Rock art and Tribal art. In addition to the same an overview with the focal impressions have been included separately in another part, entitled summary and conclusion. In the summary, herein, the above noted arrangement has been kept unchanged. The constituent part have also been discussed in the forenoted ordering.

In introducing the work special attention has been paid on art, specially rock art and tribal art in the dimension of anthropology. In Indian context majority of the works on rock art have been carried by archaeologists with their primary connections or roots in history, art history and allied subjects. On the other

hand works on tribal art is of lesser quantum, albeit the studies are indepth in nature. This work belonging to the second set have been carried out by anthropologists who have studied the tribal art with the application of appropriate methodology and the results have yielded a kind of relationship between art and man. In the latter category there are both artists and the viewers. Works on tribal art, carried out by the anthropologists, are provided with a greater magnitude and higher depth. This is revealed from the functional implications, motivations and operational mechanics of tribal art. In presenting introduction the relevant comments have been specifically included. Thereafter the backdrop has been presented with an overview of the aims and objectives concerned with the problem proper.

Instead of hypotheses, theories have been critically examined and thereby the prime concepts, both allied and related, have been taken into consideration. In the text, detailed discussion on the major aspects have been incorporated. At the same time both thoughts and theories have not been set aside, concerned with rock art and tribal art, and so also a conjunctive issue, comprising the integration of rock art and tribal art.

For any research project a somewhat exhaustive account of the earlier works are to be presented. In the present work this principle has been followed. In the same sector a logical divisions have been made on the issues related to earlier works. Here the main focus is on art, with two sets - rock art and tribal art. Greater care has been taken on the spatial dimension. The core part

of the universe is India and in view of the same deflections has been intentionally restricted. It is well known that rock art is present in different parts of the world, both Old and New. The western part of Europe is a crucial area with the presence of rock art, in the form of paintings and engravings. Very intensive studies have been carried out on rock art in different parts of Europe. On the basis of the same a number of theories have been floated. Any involvement, even in minor level, with those studies on rock art may lead to a kind of unmanagable situation. In addition to the same despite the fact that in India rock art study was initiated earlier and by now quite a number of work have been done, but the theoretical part is still devoid of.

To other continents, specially Australia and Africa are of great importance for the presence of both rock art and tribal/aboriginal art. In the same frame North America is no exception. However, art being a part of culture and laid in tradition any comparison and correlation may turn useless. This is more appropriate when the rock art and tribal art in India has followed a different tradition. In spite of the above noted fact important works on rock art and tribal art which are relevant with the present work have been included in the chapter on earlier works.

Special attention has been paid on Indian rock art studies, already carried out and similar trend have been followed with the tribal art. It may be conceded that the rock art in India is not yet properly dated. Even then, rock art is comparatively older than the tribal art. This particular issue, specially with regard to

drawing the relationship and finding out the linkage has been mentioned by a number of workers. But there is hardly any works which indicates a result with genuine information and thought-provoking analysis and results.

The next chapter is on the problem. Prior to putting forward the problem proper some necessary information have been given indicating the limitation and constraints. In brief but comprehensive form the problem proper has three components. These are rock art, tribal art and the linkage between the two in terms of tradition in which the motifs have been given greater weightage. In presenting the problem a number of issues have been given due consideration, these include distribution, motifs with splitting up into a number of factors as morphological type, colour used, size and dimension, perspective of the drawing, direction of the depiction, identification of motifs in isolation and in association.

Finally the scanning has been made from three perspectives, as general, specified to rock art and focus on tribal art. Both the sets, dealing with rock art and tribal art have been discussed with regard to the problems which are prevailing and the points from the problem which are to be taken into account. Both the sets have never been taken together but at times the integration has been attempted with a view to analysing the art form. In the same scheme attention has also been paid to find out the similarities and dissimilarities, both in macro and micro levels. Along with this the relationship between the two sets of art form has been given a special attention.

Methodology has been taken into consideration in useful form and meaningful projections. This particular issue is the operational mechanics which are responsible in tackling with the problem. As a matter of fact methodology must be appropriate and with precision. There are methodology for the collection of data and in case of art the different forms are drawing, photography etc. These are the technical features and in modern times with improvement of science and technology this area has been developed to a great extent. The present author confesses that one can not be expert in different fields and as a matter of fact for this technical issues services have been taken from the experts.

In the aspect of methodology there are various issues, as selection of the problem, elaboration of the same, identification of data required, techniques to be developed for the collection of data. In addition to the same there are also other methods pertaining to the analysis for drawing the results and display of interpretation. For all the above noted components special care has been taken. The already existing methodology which is relevant with the present work has not only been discussed but in cases, when necessary, have been applied. In dealing with methodology a importance part has been given on quantitative assessment of the motifs in their varied attributes. This methodology appears to be very useful in understanding the traits of culture in art. The results of such analysis is also useful for proper comparisons and even correlation. With such exercises on componential analysis covering a number of attributes and variables the art tradition can

be understood in proper way in terms of genesis, function, techniques, spread, diffusion and influence. It requires to be noted that in methodological aspect, a number of techniques and methods have been developed to cope with the problems and sub-problems.

Rock art has been included as a separate chapter, in which three localities, namely Pachmarhi, Isco and Ulap have been selected. The selection criteria appears to be both appropriate and useful with a view to finding out the representative samples on localities. All the localities are situated in separate geo-environmental niches and there are discrete differences among them. This have been indicated with the corroboration of data on geology, geomorphology, flora and fauna on the one hand and the overall cultural perspectives of the locality. In Pachmarhi locality there are 13 sites and the number of rock paintings is highest. The motifs from all the sites have been analysed, indicating the distinctions and affinities. This has laid to comprehend the rock art of Pachmarhi locality in proper form. The major component of rock art which have been codified, collected and analysed include morphic types, views represented, direction of motifs, style of execution, dimension, superimposition, colour scheme etc. The primary point is the morphic types and their quantitative catering in the constituent sites and in the locality itself. All these attributory variables has been computed and analysed and thereby the characteristic features of rock art in Pachmarhi locality has been understood with comprehension and accuracy.

The same procedure has been followed with two other localities, namely Isco and Ulap. In doing so, it has been found that despite the overall similarities there are a number of differences which presents the specific identity of the locality in terms of depiction of rock art. On the whole, among the three localities there are some broad pattern of similarity. But at the same time the perceptible distinction is also met with. This particular concept has been utilized for the purpose of culture area and so also the sub-cultural niches in rock art.

Tribal art is also another component. This has been examined with the inclusion of three major tribal groups, namely the Korkus, the Lanjia Saoras and the Juangs. All these groups have been taken as the representative tribal communities who are practicing art work. They have varied functions, some of them are common as decoration, festivities etc. At the same time distinction in art work and functional differences are also observed specially with religion, ideology and behaviour, and moreso the funerary activities. The most important tribal art works are of the Korkus and their motifs may be compared with the rock art of Pachmarhi. In the same way with lesser affinity and relationship are found to occur between the Juangs and so also the Lanjia Saoras vis-a-vis the rock art of Isco and Ulap. The memorial pillar used by the Korkus are somewhat parallel in terms of motifs with those found in the rock art of Pachmarhi. In case of the Juangs a great part of their art work is represented in wood carving and there too the affinity found to be marked.

Finally in the present chapter after the summary part the comprehension has been included with special reference to the art tradition, both of rock art and tribal art in the dimension of cultural continuity and diffusion and even in case a kind of parallelism. At this juncture it is to be pointed out that the presence of rock art and tribal art are found to coaxed in the same area and in the micro level within a number of localities. It may be apprehended that there is some kind of geographical determinism for the coexistence of rock art and tribal art. This is found to follow in majority of the cases. Exceptions are not altogether absent. There are some tribal groups, living in different areas who are provided with their own art works. But so far the same area has not yielded any evidence of rock art. The glaring example is the north-east. While in other areas, specially in the west and southern part of India, both rock art and tribal art are found to occur within the same geo-cultural locales. This may point to the factor related to the ethnic element of the tribal groups and their involvement in rock art with functioning implications, set in deep cultural milieu. It is not unlikely that in those areas where rock art and tribal art with relatively earlier and later days have some kind of traditional continuity, intercepted by motifs and also coupled with technique and ideology. This change may be attributed to culture change, either spontaneous or induced.

OBSERVATIONS IN ADDITION

In addition to the summary, presented immediately earlier, it appears to be appropriate to include a number of additional observations. These are :

1. Several early workers (Gordon, 1936; Roy, 1963; Naumeyer, 1985) have mentioned that the Korku memorial pillars and wooden commemorative tablets have noticeable similarities in style and content with at least a section of rock paintings in Pachmarhi. They have recommended for a study involving both sectors of art in tracing the genesis and authorship of rock art in Pachmarhi.

2. In rock art, the scenes of feud or battle represent almost identical type of dress, personal adornment and weapons preponderant in both conflicting group of warriors. Neumayer (1985) and Dubey (1992) have mentioned head hunting scenes from rock art sites within Mahadeo hills near Pachmarhi. In such view both assailant and the victim have similar hair style, ear-ring and other morphological features. Such similarities suggest that the painters have experienced an in-group struggle and conflict.

3. There are two possibilities for such scenes of feud which are frequent in execution and dominating in them. As the motifs are naturalistic and thematically more realistic, it is rational to conceive that the rock artist have witnessed such a battle and genocide, instead of being influenced by tribal folklore, transmitted orally.

4. In Imli-Khoh, a rock art site in Pachmarhi the figure of two vultures sitting on a tree and accompanied scene signify that the artist was moved by horror of the battle and conceived of the inevitable aftermath.

5. In Korku society, horse - riding figures symbolize wealth, power, prestige and status among the tribal community. Overall superiority and leadership is characterized through such figure of horse riders and other heroes are holding weapons. The cult of horse has a special relevance in the Korku mythology and cosmogony. In Korku creation myth, the horse is viewed as a threatening evil, that repeatedly prevented god in creation of man by demolishing the images of first men (Russell and Hiralal, 1975; Fuchs, 1988). A number of earlier workers pointed out the resemblance of the Korku horse riding figures with rock art figurines of Pachmarhi.

6. Art is more common among tribal societies practising shifting hill cultivation and living in forest habitat. In rock art, there is no direct presence of cultivation, but rearing of cattle is sometimes more pronounced.

7. In Saora society the concept of art is synonym of writing. So it is primarily communicative in form and purpose. The Saora icons are supernatural means to ensure prosperity and solving every day problems. So it is an expression of their anxiety and other syndromes.

8. The Korku carvers during manufacturing gathas, initially prepare an outline sketch of the conceived figure by application of red ochre paint. By scooping out the other parts outside the borderline ultimately the figure is represented in relief.

9. In both rock art and tribal art it is observed that for drawing, specially the figures of anthropomorph and zoomorph, the initial drawings constitute arrangement of triangles to form the required figure. Initially the outline is drawn and later it is filled with colour. Thus it may be said that the block figures have emerged from the outlined figures.

10. Primitive art of both categories, i.e. rock art and tribal art involve some common technical features. These are : the human forms are largely viewed in either front or in fronto-lateral aspect, while the animal figures are mostly depicted in profile views. Such views are more communicable and possibly easiest for execution.

11. In rock art human figures holding umbrella is associated to a community dance scene. Such dances holding umbrella is not uncommon among the Korkus and Gonds, the indigenous tribal groups of the Satpuras. It has been observed by the present worker that Marwa festival of Korkus is held during diwali (October-November). The Korkus celebrate rites and rituals related to upkeep of their domesticates. On that day a symbolic umbrella like figure made of bamboo pole with feathers of peacock is erected on the top of the sacred grove where the function is organized. This broad similarity might have some linkage between the two sets.

12. In rock art two types are prevalent. The former is single motif that are unrelated to other figures of the same rock shelter. The other type is descriptive account, combination of several motifs being integrated to a common theme.

13. In rock art, specially in battle scenes quiver is seen whereas in tribal art bow and arrows are common but quivers are not mentioned.

14. In Bhimbetka and sites of Betwa source region fist prints are numerous. These are also common to the Gonds and Korkus and are associated to the belief of witch-baffling and to protect the household and domesticates from the evil eye.

15. Availability of microliths and sporadic finds of pottery are more or less common in many localities.

In the present issue there are other observations pertaining to hypothesis, specially of Fisher (1961). It is based on the data of world ethnographic samples. His first hypothesis entails that in the art of egalitarian tribal societies visual repetitions predominate. In hierarchical societies, varied design elements are more conspicuous. The data on rock art localities and tribal societies under this study have been examined and found that in all rock art sites as well as those of tribal societies repetition of art is a common feature.

Fisher's second hypothesis relates egalitarian societies with presence of maximum empty space. On the contrary in hierarchical societies minimum empty space is left in art compositions. Considering the rock art localities in Pachmarhi maximum empty space exist within the painted area of the rock canvas. Such feature is also common in the art of the three tribal societies under study. Exception is met with in the rock art of Ulap, Orissa and Isco, Bihar. Therein the art motifs are more congested and inter-spaces are minimum pointing to a relatively advanced form of society with hierarchal phenomenon.

Testing the third hypothesis, it has been found that in all rock art sites and tribal depictions the figurative and non-figurative motifs are largely symmetrical which confirms the egalitarian society as their origin. Fisher (1961) had also related enclosed figures with the egalitarian societies, and in opposition, enclosed figures are predominant within hierarchical societies. In rock art, of Pachmarhi, in Juang society and partly in Ulap, art motifs are non-enclosed. On the other hand, Isco rock art and in art forms of the Korku and Saora tribal society enclosed figures are preponderant. Considering the above noted hypotheses, it may be inferred that rock art of Pachmarhi is a product of egalitarian society, whereas in Ulap and Isco sites, some elements of developed form are found to exist. Among the Korku and Lanjia Saora societies their art illustrates some features which are placed in transition between egalitarian and fullfledged hierarchical societies. These inferences are to be cheked with the utilization of other forms of data for the purpose of confirmation.

In the present endeavour, a number of hypotheses have been tested and the discussion of the same has been made earlier in appropriate context. It has also been observed that a great number of the hypotheses have been formulated but in most of the cases confirmation has not been made with appropriate data. It is to be borne in mind in the facet of art, both of rock art and tribal art, a number of factors are involved and in view of the same, a hypothesis may be correct from one perspective but it turns futile from other aspect. With the consideration one has to be cautious prior to formulation of any hypothesis which is provided with rationality.

CONCLUSION

This part deals more with comprehension than conclusion. In precise form the primary aim is on art which is provided with two foci - the rock art and tribal art. These two sets of art when examined separately, a comparison is brought out in spontaneous form. Even then, demarcation in strictest sense is difficult to discern. In the same way, the presence of cultural traits in art form may be understood in comparative terms, but the degree of resemblance as well as difference is hard to apprehend. In the present perspective, it is apt to indicate the reason for the comparison. Comparison connotes both distinctions and similarities. Earlier, necessary comparisons have been made with rock art and tribal art separately in different localities under study. In the said context, endeavours have been made to account for the differences and similarities. This exercise is possible and so also appropriate because in both the sets, the *disconformity* prevails. Such discrete distinctions do not appear to be very practical in the present case, especially when the *heterogeneity* is present in all basic forms, both in rock art and tribal art. Besides art, in its totality, there are a number of issues which are linked directly and/or indirectly with art of both the sets. The major factorial constituents are relative chronology, origin, environment, economic pursuits and overall life style. Above all, there are other differences as the interactions among the members of the groups, expositions to other influences within their universe.

It is not really known about the biological characters of the human groups, connected with the art. With rock art, the reconstruction, if any, is apprehension and tribal art, it is reconstruction with valid data. However, ethnic differences, especially of the tribal groups connected with their art can not be ruled out. In the total makeup, the psyche of the two groups of people responsible for the rock art and the tribal art can seldom be excluded. In art, irrespective of space and time, the chronological inputs are of utmost importance. In the same scheme, concept, perception, ideas, beliefs etc. are the crucial constituents than operations and manifestations. In other words, it may be said that the blue print of the art to be depicted is laid on the psychological level of the artist themselves. Among the artists, a standard pattern is expected to be present as the consequence of tradition. Simultaneously, deviations in individual cases can not be ignored. The deflections of this nature are taken as the performing identity of the artists on the one hand and his psychic action and interaction on the other. Not to that extent, but in rudimentary form, the viewers in a group have a common understanding and at the same time there are inter-personal differences which enabled them to assimilate in one's own respective form. This comes within the fold of individual variation.

The comparative assessment of art in the present case is between the rock art and tribal art. Among the rock art localities, and so also the tribal art locations taken into account for the present study, additional remarks without validity appear to be useless. The overall condition both of rock art and tribal art is

same. These two sets of art have been scrutinized and scanned in necessary details. One can make the comparative study of rock art and tribal art, taking the respective localities in an integrated manner. There is no restriction to make the comparison, taking the rock art localities and tribal art locations as separate identities. In the present case, with a relatively broader canvas, such attempt, in indepth nature, turns to be unmanagable. In accordance with the meaningful propositions and useful exercise, the present worker has intentionally restricted such complexities which are not of much avail. It is important to note that a preliminary study following the same paradigm does not lead to any concised results.

The comparisons herein have been made primarily with the help of morphic type of the art forms, following the usual model of different morphic motifs, taken both separately and in association. It was proposed to carry out the quantitative analysis, constituting the frequency and percentage of specific morphic types of the art motifs. The result turns significant and leads to valid conclusions. As a matter of fact, the treatment for the comparative study has been taken in the form of the presence of morphic motifs, either only in rock art or only in tribal art or both in rock art and tribal art.

IN CONFORMITY

The total number of morphic types of the rock art motifs is 119. All the morphic types have been lumped together in nine categories. These categories along with the frequency with the consideration of both rock art and tribal art are included here in an ordering manner.

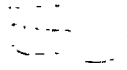
The major motifs with their respective incidences in rock art are : anthropomorph with trait of material culture (36; 30.51%), zoomorph (31; 26.05%), trait of material culture (27; 22.88%), anthropomorph (11; 9.32%), association of anthropomorph, zoomorph and trait of material culture (7; 5.93%), natural object (3; 2.54%), phytomorph (2; 1.70%), non-figurative motif all are included within a single category (1; 0.85%) and inscription (1; 0.85%), shown herein (Table 19).

It is important to observe that the motifs with numerical dominance include zoomorph, material trait and anthropomorph with association of material trait. Anthropomorph in isolation, i.e. without the association of other morphic types, is relatively less. However, the importance of zoomorph turns the major attraction for its higher incidence. This has a bearing on the artists and secondarily on the viewers. The forementioned three major morphic types may also be explained in a different way. For example, anthropomorph with association of trait of material culture has an incidence of 36. In the distribution of rock art and tribal art, the respective figures are 21 and 27. Out of which there are instances in which the same morphic type is common to both rock art and tribal art. A good deal of similarities are also met with zoomorph in which total incidence is 31 and the breakups are 24 and 23 for rock art and tribal art respectively. There are 12 elements in which the same motif is found to be common. The other morphic type includes the trait of material culture, total elements being 27 and the numbers are 23 and 18 respectively for rock art and tribal art. This motif is found to be common in 14 cases.

(Table : 18, 19).

The number of other morphic types are comparatively less and as the trend is found to be similar, further elaboration appears to be needless. The incidence of morphic types in general indicates that there are some common motifs found both in rock art and tribal art. Again, a good proportion is found to exist in both forms of art as the trait of common occurrence. In other words, it is suggested that the concerned tribal communities in which art work is practised, the members of the same communities might have been exposed, directly or indirectly, to rock art from which the idea of selection criteria of the motifs has taken place. If the possibility of exposition is excluded, the natural environment, relationship between human groups, both of ancient and present day on the one hand and the living forms of motifs, etc. on the other are the factors responsible for affinity. In brief, it is also indicated that the continuity of tradition can not be underestimated.

The above comment appears to be a strong point to indicate that either a direct or indirect linkage is not unexpected between the two sets of art works. It is further apprehended that the tribal artist had no opportunity to be influenced by the people belong to rock art. This particular area is to be investigated thoroughly in future for arriving at a valid conclusion. The cultural identity of the makers of rock art and tribal art can seldom be denied because for both the groups there are a number of special motifs, acting as the characteristic feature of the group concerned. The common motifs may also be explained in the light of the prevailing common resources and needs faced with both the groups.

Preponderance of zoomorphic type may also be explained, in the form of assumptions in a number of ways. There was a close relationship between man and animals. The benevolent animals were looked into in different ways, as items of food with easy availability and domestic service of varied forms, rendered by the animals. The depiction of such animals may also be taken as a way of learning process related to hunting and domestication to the younger generations. Animal with fatal activities are separated from other animals. Man used to feel scared of those animals and the presence of the same in certain areas was depicted with relatively large scale drawings. This process acted as a form of communication  to the people to make them aware who do not have such information.

Higher incidence of animals, at least some of them, may be viewed from a different perspective. It is of totem, myth and supernatural belief those are connected with representation. In tribal art, animals are also depicted as hunting games, domesticates and offerings to supernatural beings. The concept of totem is markedly present among most of the tribes and similar situations might have prevailed with the people of rock art who can not be placed in long-range chronological distance. Totem has different functions, as in exogamous marriage, to maintain village solidarity, respect to the specific totem by the people who are members under the same totem etc. Animals, as totems are adorned. All these special characters are expected to be present in the communities, bearing rock art and tribal art. It is not improper to make logical speculation between the artists (and viewers) and their respective totems.

Some information are given here which indicate that there are some morpho-typological motifs markedly present both in rock art of Pachmarhi locality and among the Korkus - a local tribe practising art. A total number of 19 motif elements are common in both rock art and tribal art in the same locality. The conspicuous motifs are deer and horse in the category of zoomorph, group dancers belong to anthropomorph category, horse riders and men with bows and arrows belong to the category of anthropomorph associated with zoomorph and traits of material culture. There are a number of artifacts which are found to be associated with anthropomorphs, as holding sword, knife/dagger, stick or club and even umbrella. In the same fold, motifs of musicians, drummer etc. are also depicted. These motifs are included within the category or anthropomorph with trait of material culture. Material traits are also found in isolation as of club/stick, flute/horn. Such close similarities of the motifs between the two sets of art provides suggestions that both the components are neither exactly similar nor discretely different but they have close affinities.

The conclusions herein belong to two stages. One deals with confirmation achieved from the results. The other stage indicates the future course of work centering round the linkage and relationship between two set of arts. Any research work can not be considered to be completed and reaches terminal end. Rather, researches make solution of the problem and at the same time new problem emerges. The problems which have emerged through this work indicates its success. It is hoped that these emerging problems will be worked out in near future by expert scholars with experiences.

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T A B L E S

TABLE NO. 1 : FREQUENCY AND PERCENTAGE OF DIFFERENT MORPHIC TYPES
IN PACHMARHI EXECUTED THROUGH VARIOUS TECHNIQUES

	Painting	Engraving	Painting on Engraving	Total	
	f	f	f	f	Percentage
Zoomorph	475	-	-	475	24.32
Phytomorph	21	-	-	21	1.08
Anthropomorph	231	-	-	231	11.83
Material traits	96	-	-	96	4.92
Zoomorph and phytomorph	4	-	-	4	0.20
Zoomorph and anthropomorph	9	-	-	9	0.46
Anthropomorph and phytomorph	2	-	-	2	0.10
Zoomorph and material trait	4	-	-	4	0.20
Anthropomorph and material trait	906	-	-	906	46.39
Zoomorph, anthropomorph and material trait	34	-	-	34	1.74
Zoomorph, anthropomorph and phytomorph		-	-	1	0.05
Non-figurative motif	86	56	1	143	7.32
Unidentified	27	-	-	27	1.38
Total	1896	56	1	1953	
Percentage	97.08	2.87	0.05	100.00	

TABLE NO. 2 :

FREQUENCY AND PERCENTAGE OF THE REPRESENTED VIEW OF THE MOTIFS

LOCALITY : PACHMARHI

MORPHIC TYPES	FRONT	BACK	FRONT/ BACK	PROFILE	FRONT-CUM LATERAL	TOP	BOTTOM	UNIDEN- TICAL	TOTAL
	f/%	f/%	f/%	f/%	f/%	f/%	f/%	f/%	f/%
Zoomorph	38 8.00	1 0.21	1 0.21	427 89.89	6 1.27	1 0.21	1 0.21		475 24.32
Phytomorph	16 76.19			5 23.81					21 1.08
Anthropomorph	31 13.42		13 5.63	3 1.30	177 76.62	3 1.30	1 0.43	3 1.30	231 11.83
Material traits	19 19.79			1 1.04	1 1.04			75 78.13	96 4.92
Zoomorph and phytomorph				2 50.00	2 50.00				4 0.20
Zoomorph and anthropomorph				6 66.67	3 33.33				9 0.46
Anthropomorph and phytomorph							2 100.00		2 0.10
Zoomorph and material trait				4 100.00					4 0.20
Anthropomorph and material trait	57 6.29		20 2.21	9 0.99	812 89.63	6 0.66	1 0.11	1 0.11	906 46.39
Zoomorph, anthropomorph and material trait				11 32.35	23 67.65				34 1.74
Zoomorph, anthropomorph and phytomorph					1 100.00				1 0.05
Non-figurative motif								143 100.00	143 7.32
Unidentified								27 100.00	27 1.38
Total	161	1	34	468	1025	10	5	249	1953
Percentage	8.24	0.05	1.75	23.96	52.48	0.51	0.26	12.75	100.00

TABLE NO. 3 : FREQUENCY AND PERCENTAGE OF DIRECTION OF
MOTIFS ON THE BASIS OF MORPHIC TYPES

LOCALITY : PACHMARHI

MORPHIC TYPE	Towards right		Towards Left		Neutral		Total	
	f	Percentage	f	Percentage	f	Percentage	f	Percentage
Zoomorph	344	72.42	93	19.58	38	8.00	475	24.32
Phytomorph					21	100	21	1.08
Anthropomorph	123	53.25	98	42.42	10	4.33	231	11.83
Material traits	1	0.11			95	98.95	96	4.92
Zoomorph and phytomorph	3	75.00	1	25.00			4	0.20
Zoomorph and anthropomorph	5	55.55	4	44.44			9	0.46
Anthropomorph and phytomorph	2	100					2	0.10
Zoomorph and material trait	3	75.00	1	25.00			4	0.20
Anthropomorph and material trait	535	59.05	366	40.39	5	0.55	906	46.39
Zoomorph, anthropomorph and material trait	23	67.65	11	32.35			34	1.74
Zoomorph, anthropomorph and phytomorph	1	100					1	0.05
Non-figurative motif					143	100	143	7.32
Unidentified					27	100	27	1.38
Total	1040		574		339		1953	
Percentage	53.25		29.39		17.36		100	

TABLE NO. 4 : FREQUENCY AND PERCENTAGE OF THE MORPHIC TYPES AND STYLE EXECUTED
IN THE MOTIFS OF ROCK ART

LOCALITY : PACHMARHI

MORPHIC TYPES	STICK FIGURE OR LINK DRAWING	BLOCK SOLID BODY	OUTLINE ON CONTOUR	HOLLOW BODY PARTLY FILLED	X-RAY FIGURE AND/OR FILLED WITH PATTERN	TOTAL
	f/%	f/%	f/%	f/%	f/%	f/%
Zoomorph	36 7.58	369 77.68	43 9.05	10 2.11	17 3.58	475 24.32
Phytomorph	16 76.19	4 19.05			1 4.76	21 1.08
Anthropomorph	34 14.72	191 82.68	3 1.30		3 1.30	231 11.83
Material traits	75 78.13	14 14.58	5 5.21	1 1.04	1 1.04	96 4.92
Zoomorph and phytomorph		3 75.00		1 25.00		4 0.20
Zoomorph and anthropomorph		9 100.00				9 0.46
Anthropomorph and phytomorph		2 100.00				2 0.10
Zoomorph and material trait		3 75.00		1 25.00		4 0.20
Anthropomorph and material trait	48 5.30	852 94.04	4 0.44	2 0.22		906 46.39
Zoomorph, anthropomorph and material trait	1 2.94	33 97.06				34 1.74
Zoomorph, anthropomorph and phytomorph		1 100.00				1 0.05
Non-figurative motif	62 43.36	62 43.36	17 11.89	1 0.70	1 0.70	143 7.32
Unidentified	11	13	2		1	27

TABLE NO. 5 :

FREQUENCY AND PERCENTAGE OF THE MORPHO-TYPEOLOGICAL
CLASSES OF ROCK ART MOTIFS

LOCALITY : PACHMARHI

MORPHIC TYPES	NATURALISTIC	STYLIZED	SYMBOLIC	UNIDENTIFIED	TOTAL
	f/%	f/%	f/%	f/%	f/%
Zoomorph	469 98.74	6 1.26			475 24.32
Phytomorph	21 100.00				21 1.08
Anthropomorph	226 97.84	5 2.16			231 11.83
Material traits	96 100.00				96 4.92
Zoomorph and phytomorph	4 100.00				4 0.20
Zoomorph and anthropomorph	9 100.00				9 0.46
Anthropomorph and phytomorph	2 100.00				2 0.10
Zoomorph and material trait	4 100.00				4 0.20
Anthropomorph and material trait	904 99.78	2 0.22			906 46.39
Zoomorph, anthropomorph and material trait	34 100.00				34 1.74
Zoomorph, anthropomorph and phytomorph	1 100.00				1 0.05
Non-figurative motif			143 100.00		143 7.32
Unidentified			25 92.59	2 7.41	27 1.38
Total	1770	13	168	2	1953
Percentage	90.63	0.67	8.60	0.10	100.00

TABLE NO. 6 : CLASSIFICATION OF MORPHIC TYPES AND DIMENSION OBSERVED IN MAJOR
 AXIS IN METRIC VARIABLES, SHOWN IN FREQUENCY AND PERCENTAGE

MORPHIC TYPE	Large (Above 50 cms.)		Medium		Small		Total	
	f	Percentage	f	Percentage	f	Percentage	f	Percentage
Zoomorph	42	8.84	165	34.74	268	56.42	475	24.32
Phytomorph	4	19.05	5	23.81	12	57.14	21	1.08
Anthropomorph	1	0.43	41	17.75	189	81.82	231	11.83
Material traits	6	6.25	19	19.79	71	73.96	96	4.92
Zoomorph and phytomorph			2	50	2	50	4	0.20
Zoomorph and anthropomorph	2	22.22			7	77.77	9	0.46
Anthropomorph and phytomorph					2	100	2	0.10
Zoomorph and material trait	1	25.00	2	50.00	1	25.00	4	0.20
Anthropomorph and material trait	11	1.21	241	26.60	654	72.19	906	46.39
Zoomorph, anthropomorph and material trait	5	14.71	13	38.24	16	47.06	34	1.74
Zoomorph, anthropomorph and phytomorph			1	100			1	0.05
Non-figurative motif	9	6.29	38	26.57	96	67.13	143	7.32
Unidentified	1	3.70	5	18.52	21	77.77	27	1.38
Total	82		532		1339		1953	
Percentage		4.19		27.24		68.56		100

TABLE NO. 7 : PRESENCE AND ABSENCE OF SUPERIMPOSITION IN DIFFERENT
MORPHIC TYPES, SHOWN IN FREQUENCY AND PERCENTAGE

LOCALITY : PACHMARHI

MORPHIC TYPES	PRESENT		ABSENT		Total	Percentage
	f	Percentage	f	Percentage		
Zoomorph	39	(8.21)	436	(91.79)	475	(24.32)
Phytomorph	1	(4.76)	20	(95.24)	21	(1.08)
Anthropomorph	15	(6.49)	216	(93.51)	231	(11.83)
Material traits	1	(1.05)	95	(98.96)	96	(4.92)
Zoomorph and phytomorph			4	(100.00)	4	(0.20)
Zoomorph and anthropomorph			9	(100.00)	9	(0.46)
Anthropomorph and phytomorph			2	(100.00)	2	(0.10)
Zoomorph and material trait			4	(100.00)	4	(0.20)
Anthropomorph and material trait	49	(5.42)	857	(94.59)	906	(46.39)
Zoomorph, anthropomorph and material trait	3	(8.82)	31	(91.18)	34	(1.74)
Zoomorph, anthropomorph and phytomorph			1	(100.00)	1	(0.05)
Non-figurative motif	8	(5.59)	135	(94.41)	143	(7.32)
Unidentified			27	(100.00)	27	(1.38)
Total	116		1837		1953	
Percentage	5.94		94.06		100.00	

TABLE NO. 8 : FREQUENCY AND PERCENTAGE OF THE MONOCHROMATIC ROCK ART MOTIFS ARRANGED
IN ACCORDANCE WITH MORPHIC TYPES

LOCALITY : PACHMARHI

MORPHIC TYPES	WHITE	GRAY	RED	MAROON	VERMILION	PINK	BLACK	TOTAL	% within total No. of motifs
	f/%	f/%	f/%	f/%	f/%	f/%	f/%	f/%	
Zoomorph	426 92.00	6 1.30	2 0.43	3 0.65	8 1.73	10 2.16	8 1.73	463 25.41	23.71
Phytomorph ^s	17 94.44					1 5.56		18 0.99	0.92
Anthropomorph	221 97.70	1 0.44				4 1.77		226 12.40	11.57
Material traits	94 98.95					1 1.05		95 5.21	4.86
Zoomorph and phytomorph	4 100.00							4 0.22	0.21
Zoomorph and anthropomorph	9 100.00							9 0.49	0.46
Anthropomorph and phytomorph	2 100.00							2 0.11	0.10
Zoomorph and material trait	4 100.00							4 0.22	0.21
Anthropomorph and material trait	841 96.88	3 0.35	11 1.27		3 0.35	9 1.04	1 0.12	868 47.64	44.44
Zoomorph, anthropomorph and material trait	29 100.00							29 1.59	1.48
Zoomorph, anthropomorph and phytomorph	1 100.00							1 0.05	0.05
Non-figurative motif	74 96.10		1 1.30	1 1.30	1 1.30			77 4.23	3.94
Unidentified	27 100.00							27 1.48	1.38
Total	1749	10	14	4	12	25	9	1823	1.09
Percentage	96.00	0.55	0.77	0.22	0.66	1.37	0.49	100.00	

TABLE NO. 9 :

FREQUENCY AND PERCENTAGE OF THE BICHROMATIC ROCK ART MOTIFS
ARRANGED IN ACCORDANCE WITH MORPHIC TYPES

LOCALITY : PACHMARHI

MORPHIC TYPES	B I C H R O M E			T O T A L
	RED AND WHITE	VERMILLION RED AND WHITE	MAROON AND WHITE	
	f/%	f/%	f/%	
Zoomorph	6 50.00	4 33.33	2 16.67	12 16.22
Phytomorph			3 100.00	3 4.05
Anthropomorph	2 40.00	2 40.00	1 20.00	5 6.76
Material traits		1 100.00		1 1.35
Zoomorph and phytomorph				
Zoomorph and anthropomorph				
Anthropomorph and phytomorph				
Zoomorph and material trait				
Anthropomorph and material trait	7 18.42	30 78.95	1 2.63	38 51.35
Zoomorph, anthropomorph and material trait		5 100.00		5 6.76
Zoomorph, anthropomorph and phytomorph				
Non-figurative motif	1 10.00	9 90.00		10 13.51
Unidentified				
Total	16	51	7	74
Percentage	21.62	68.92	9.46	100.00

TABLE NO. 10 : FREQUENCY AND PERCENTAGE OF ZOOMORPHIC TYPES DEPICTED IN THE ROCK ART OF PACHMARHI

TYPES OF ZOOMORPH	f	%
Insects		
Bees with beehive (<u>Apis</u> sp.)	31	5.88
Other non-vertebrate		
Spider (<u>Nephila</u> sp.)	1	0.19
Vertebrate		
Fish	1	0.19
Fowl (<u>Gallus</u> sp.)	1	0.19
Peacock (<u>Pavo Cristatus</u>)	1	0.19
Vulture (<u>Coragyps</u> sp.)	2	0.38
Other birds	5	0.95
Porcupine (<u>Hystrix</u> indica)	1	0.19
Cow including calf (<u>Bos</u> sp.)	47	8.92
Ox (<u>Bubalus</u> sp.)	32	6.07
Bison (<u>Bison bonasus</u> sp.)	11	2.09
Other bovids	51	9.68
Elephant (<u>Elephas</u> sp.)	19	3.61
Horse (<u>Equus</u> sp.)	44	8.35
Deer (<u>Cervus</u> sp.)	69	13.09
Bear (<u>Selenarctos</u> sp.)	5	0.95
Dog (<u>Cuon</u> sp.)	8	1.52
Tiger (<u>Panthera</u> sp.)	9	1.71
Lion (<u>Panthera leo</u>)	4	0.76
Other carnivores	1	0.19
Other quadrupeds	149	28.27
Monkey (<u>Macaca</u> sp.)	33	6.26
Unidentified	2	0.38
Total :	527	100.00

TABLE NO. 11: FREQUENCY AND PERCENTAGE OF DIFFERENT TYPES OF MATERIAL TRAIT
FOUND IN ISOLATION/UNRELATED TO OTHER MOTIFS;

LOCALITY : PACHMARHI

Types of Material Trait	f	Percentage
Stick / Club	1	1.04
Sword	-	-
Bow	29	30.21
Ladder	5	5.21
Cratch	1	1.04
Arrow	25	26.04
Pot/Basket/Bowl	14	14.58
Noose trap	1	1.04
Hut without walls	1	1.04
Umbrella	5	5.21
Spear	1	1.04
Flag	1	1.04
Axe	1	1.04
Tant/Rock shelter	1	1.04
Wooden Platform	1	1.04
Pot	5	5.21
Bow and Quiver	2	2.08
Unidentified box like object	1	1.04
Horn / Flute like - musical instrument	1	1.04
T o t a l	96	100.00

TABLE NO. 12 : THEMATIC ANALYSIS OF PRINCIPAL COMPOSITIONS IN ROCK ARTS OF PACHMARHI

	FREQUENCY	%
Battle scenes	32	37.65%
Hunting scenes	24	28.24%
Animal husbandry	7	8.24%
Group dance	6	7.05%
Musicians	6	7.05%
Household scenes	5	5.90%
Collection of honey	3	3.52%
Use of carrying pole	2	2.35%
Total :	85	100.00%

TABLE 13 : FREQUENCY AND PERCENTAGE OF THE ROCK ART MOTIFS WITH THE ASSOCIATION OF ANTHROPOMORPH,
ZOOMORPH AND MATERIAL TRAITS INDICATING OPERATIONAL ACTIVITIES: LOCALITY : PACHMARHI

T Y P E	f	%
Holding stick/club	39	4.11
Holding sword	428	45.05
Holding bow and arrow	323	34.0
Holding Shield	325	34.21
Holding quiver	24	2.53
Holding axe	10	1.05
Horse rider	19	2.11
Elephant rider	2	0.21
Holding spear	7	0.84
Wounded warrior (stuck with arrow)	4	0.42
Carrying pole on the shoulder	7	0.74
Climbing scene	3	0.32
Holding flag	1	0.11
Holding wheel	1	0.11
Musicians	6	0.63
i) Playing on harp	1	0.11
ii) Playing on drum	2	0.21
iii) Playing on flute/horn	3	0.32
Holding umbrella in hand	3	0.32
↳ Anthropomorph in disguise of a lion	1	0.11
Holding only arrow	35	3.68
Holding only bow	106	11.16
Holding unidentified object	71	7.47
Anthropomorph under a shelter	2	0.21
Holding knife / dagger	2	0.21
Anthropomorph with head dress	5	0.53
Anthropomorph with bun-type hair style	500	52.63
Anthropomorph with pigtail type hair style	5	0.53
Anthropomorph with dishavelled hair	6	0.63
Anthropomorph with ear ring	4	0.42
Anthropomorph with upper garment	5	0.53
Anthropomorph with lower garment	377	39.68
Anthropomorph with loin-cloth and tail-like hanging piece of cloth at the back	5	0.53
Anthropomorph with hanging ends of waist belt	238	25.05

* When more than one artifact is hold by an anthropomorph, it is counted in respective separate categories. The percentage is calculated within 950 motifs including all anthropomorph with material trait; anthropomorph in combination with zoomorph and material trait; anthropomorph in combination with zoomorph and phytomorph and anthropomorph in combination with only zoomorph.

TABLE NO : 14
FREQUENCY AND PERCENTAGE OF DIFFERENT MORPHIC TYPES OF ROCK ART
IN THREE LOCALITIES UNDER STUDY.

Morphic type	Pachmarhi, Hoshangabad; Madhya Pradesh														Ulap, Sambalpur, Orissa	Isco, Hazaribag, Bihar
	MARA f / %	GN f / %	PL f / %	NK f / %	BB f / %	BG f / %	HM f / %	MD f / %	IK f / %	DD f / %	MR f / %	BS f / %	JD f / %	Total %		
Zoomorph	16 6.84	119 43.43	14 48.28	6 50.0	103 32.09	20 13.61	6 7.32	27 18.62	84 31.23	10 12.35	21 44.68		49 18.15	475 24.33	7 1.80	14 3.31
Phytomorph		5 1.82			2 0.62	1 0.68		5 3.45	1 0.37	1 1.23	6 12.77			21 1.08		
Anthropomorph	32 13.68	20 7.30	5 17.24	4 33.33	48 14.95	11 7.48	11 13.41	17 11.72	31 11.52	8 9.88	5 10.64	2 4.76	37 13.71	231 11.83	14 3.60	7 1.66
Material Trait	16 6.84	1 0.36			4 1.25	2 1.36	16 19.51	17 11.72	22 8.18	3 3.70	2 4.26	9 21.43	4 1.48	96 4.92		1 0.25
Natural object															1.66	7
Zoomorph and Phytomorph	1 0.43	1 0.36			1 0.31		1 1.22							4 0.20		
Zoomorph and anthropomorph						1 0.68			3 1.12	1 1.23		1 2.38	3 1.11	9 0.46		
Anthropomorph and phytomorph					2 0.62									2 0.10		
Zoomorph and material trait	1 0.43	2 0.73											1 0.37	4 0.20		1 0.25
Anthropomorph and material trait	142 60.68	96 35.04	5 17.24	2 16.67	137 42.68	51 34.69	42 51.22	73 50.34	120 44.61	54 66.67	12 25.53	28 66.67	144 53.33	906 46.39		1 0.25
Zoomorph, anthropo- morph & material trait	4 1.71	14 5.11			1 0.31	2 1.36	2 2.44		2 0.74	1 1.23		1 2.38	7 2.59	34 1.74		
Zoomorph, anthropomorph & phytomorph	1 0.43													1 0.05		
Non-Figurative motif	16 6.84	11 4.01	5 17.24		19 5.92	58 39.46	4 4.88		6 2.23	1 1.23		1 2.38	22 8.15	143 7.32	368 94.60	392 92.67
Unidentified	5 2.14	5 1.82			4 1.25	1 0.68		6 4.14		2 2.47	1 2.13		3 1.11	27 1.38		
Total %	234 11.98	274 14.03	29 1.48	12 0.61	321 16.44	147 7.53	82 4.20	145 7.42	269 13.77	81 4.15	47 2.41	42 2.15	270 13.82	1953 100	389 100	423 100

Abbreviations, name of the site : MARA - Maradeo; GN - Ghurnar; PL - Putli Lane; NK - Nimbu Khud; BB - Bania Bauri; BG - Bainganga; HM - Hanuman Mandir; MD - Mahadeo; IK - Imli-Khoi; DD - Dorothy Deep; MR - Mount Rosa; BS - Bazar Shelter; JD - Jambudip.

TABLE NO : 15
FREQUENCY AND PERCENTAGE OF ROCK ART MOTIFS IN ISCO, BIHAR ON THE BASIS OF
MORPHIC TYPE AND COLOUR-SCHEME AVAILABLE IN DIFFERENT SECTORS

Morphic type	Monochrome											Total Monochrome	Bichrome							Painting on engraving C	Total (%)
	Dark red						White			Vermilion red E			Bichrome								
	A	B	C	D	E	F	Total	B	C	D	E		F	Total	Vermilion and red E			Total Bichrome			
Zoomorphic			2			4	6			1	1	3	3	1		7			7		14 (3.30%)
Anthropomorphic			5				5						1	1		2			2		7 (1.66%)
Zoomorph with material trait			1				1														1 (0.24%)
Anthropomorph with material trait													1			1			1		1 (0.24%)
Material trait			1				1														1 (0.24%)
Natural object			3				3							3	1	4			4		7 (1.66%)
Non-figurative Motif	8	29	84	14	7	15	157	1		1	1	30	79	28	15	231	1		232	1	392 (92.67%)
Total	8	29	96	14	7	19	173	1	1	2	1	33	84	30	15	245	1		246	1	423
%							40-90%			0.47						57.92%			58.16%	23	100%

TABLE NO : 16
 FREQUENCY AND PERCENTAGE OF ROCK ART MOTIFS IN ULAP, ORISSA ON
 THE BASIS OF MORPHIC TYPE AND COLOUR-SCHEME

Morphic type	Painting								Painting on engraving		Total	Engra-ving	Total	
	Monochrome				Bichrome				Monochrome	Bichrome	Total		f	%
	Dark red	Vermillion red	Cream	Total	Dark red on outline and Cream inside	Cream on outline and Dark red inside	Total	Total	Dark red Outline	Cream on outline Dark red inside				
Zoomorphic	1			1		1	1	2				5	7	1.80
Anthropomorphic	2			2				2				12	14	3.60
Non figurative motif	213	28	4	245	2	13	15	260	2	4	6	102	368	94.60
Total	216	28	4	248	2	14	16	264	2	4	6	119	389	100.00
%	55.53	7.20	1.03	63.75	0.51	3.60	4.11	67.87	0.51	1.03	1.54	30.59		100%

TABLE NO : 17

FREQUENCY AND PERCENTAGE OF DIFFERENT MORPHIC TYPES FOUND TO OCCUR
IN ART OF THREE TRIBAL COMMUNITIES AS PER SAMPLES UNDER CONSIDERATION.

	Juang Art (Total Sample= 126)	Korku Art (Total Sample= 60)	Saora Art (Total Sample = 60)
1. ZOOMORPH			
1. Bee (with beehive)			34(56.67%)
2. Scorpion			14(23.33%)
3. Tortoise			5(8.33%)
4. Lizard			31(51.67%)
5. Snake			39(65%)
6. Fish	11(8.73%)		6(10%)
7. Crocodile	1(0.79%)		3(5%)
8. Peacock	3(2.38%)		31(51.67%)
9. Duck			22(36.67%)
10. Fowl			45(75%)
11. Other birds	4(3.17%)		32(53.33%)
12. Bull or Ox	3(2.38%)		14(23.33%)
13. Bison			11(18.33%)
14. Deer	6(4.76%)	3(5%)	18(30%)
15. Horse	4(3.17%)	35(58.33%)	36(6%)
16. Elephant	10(7.94%)		30(50%)
17. Goat	1(0.79%)	1(1.67%)	
18. Tiger	4(3.17%)		21(35%)
19. Dog			16(26.67%)
20. Hare			22(36.67%)
21. Bear			16(26.67%)
22. Monkey			52(86.67%)
23. Other unidenti- fied quadrupeds	3(2.38%)	4(6.67%)	21(35%)

	<u>Juang art</u>	<u>Korku art</u>	<u>Saora art</u>
ii.PHYTOMORPH			
1. Trees and Plants	1(0.79%)	7(11.67%)	41(68.33%)
2. "Shalpa tree" (Caryota urens)			24(40%)
3. Flower	29(23.02%)		
iii.ANTHROPOMORPH	16(12.70%)		
1. Copulating pair			4(6.67%)
2. Group dance	1(0.79%)	11(18.33%)	56(93.33%)
3. Woman with child	1(0.79%)		
4. Man guiding horse rider		27(45%)	22(36.67%)
5. Supernatural being with either multi- ple hands/multiple heads.			9(15%)
6. Elephant headed (Ganesh)	1(0.79%)		
7. Patient			37(61.67%)
8. Treatment of patient.			45(75%)
9. Motif of female breasts.	1(0.79%)		
iv.MATERIAL TRAIT			
1. Umbrella		11(18.33%)	40(66.67%)
2. Gun		7(11.67%)	56(93.33%)
3. Sword	2(1.59%)	32(53.33%)	52(86.67%)
4. Knife	1(0.79%)	3(5%)	45(75%)
5. Pot/Basket	2(1.59%)	4(6.67%)	45(75%)
6. Bag		1(1.67%)	
7. House		3(5%)	
8. Drum		2(3.33%)	42(70%)
9. Spade		3(5%)	
10.Bow and arrow	2(1.59%)	8(13.33%)	32(53.33%)
11.Club/Stick	5(3.97%)	7(11.67%)	10(16.67%)

	<u>Juang art</u>	<u>Korku art</u>	<u>Saora art</u>
12. Axe	1 (0.79%)		13 (21.67%)
13. Tobacco-pipe	1 (0.79%)		
14. Flute/horn	1 (0.79%)	2 (3.33%)	42 (70%)
15. Comb			16 (26.67%)
16. Carrying pole			50 (83.33%)
17. Shield			12 (20%)
18. Spear			10 (16.67%)
v. ANTHROPOMORPH WITH MATERIAL TRAIT			
1. Holding gun		7 (11.67%)	54 (90%)
2. Sorcerer-'Ojha' (holding musical instrument)		40 (66.67%)	
3. Holding spear			10 (16.67%)
4. Holding sword	2 (1.59%)	32 (53.33%)	52 (86.67%)
5. Holding knife	1 (0.79%)	3 (5%)	3 (5%)
6. Woman with pot on head.	2 (1.59%)	3 (5%)	5 (8.33%)
7. Holding umbrella		11 (18.33%)	37 (61.67%)
8. Holding bag		1 (1.67%)	
9. Holding spade		3 (5%)	
10. Holding shield			12 (20%)
11. Drummer		2 (3.33%)	42 (70%)
12. Holding bow and arrow.	2 (1.59%)	2 (3.33%)	31 (51.67%)
13. Holding stick/club	5 (3.97%)	7 (11.67%)	10 (16.67%)
14. Holding tobacco-pipe.	1 (0.79%)		
15. Musician playing flute/horn	1 (0.79%)	2 (3.33%)	42 (70%)
16. Holding unidentified object.	3 (2.38%)		
17. Group musicians	1 (0.79%)	4 (6.67%)	56 (93.33%)
18. Carrying pot/Basket.	2 (1.59%)	3 (5%)	30 (50%)
19. Carrying pole on shoulder.			50 (83.35%)

4.

	<u>Juang art</u>	<u>Korku art</u>	<u>Saera art</u>
20.Group soldiers			40(66.67%)
21.Anthropomorph with writing pose, sitting on chair.			36(60%)
22.Man riding cycle			29(48.33%)
23.Bus with passengers			17(28.33%)
24.Trains with passengers.			9(15%)
25.Men carried by palanquin.			8(13.33%)
26.Aeroplane with passengers.			11(18.33%)
27.Holding axe	1(0.79%)		
vi.ANTHROPOMORPH WITH ZOOMORPH AND MATERIAL TRAIT.			
1. Elephant-rider with tools.	1(0.79%)		30(50%)
2. Horse-rider with tools.	4(3.17%)	35(58.33%)	36(60%)
3. Animal husbandry.		5(8.33%)	10(16.67%)
4. Hunting with bow and arrow.	2(1.59%)	2(3.33%)	31(51.67%)
5. Elephant riders or horse riders ² - holding umbrella.		11(18.33%)	37(61.67%)
6. Sacrifice of animals.			45(75%)
7. Cultivation, tilting soil.		3(5%)	25(41.67%)
vii.NATURAL OBJECTS			
1. Sun	5(3.97%)	36(60%)	29(48.33%)
2. Moon		36(60%)	29(48.33%)
3. Star			17(28.33%)
viii.NON FIGURATIVE MOTIF.	29(23.02%)		28(46.67%)
ix. INSCRIPTIONS		37(61.67%)	

TABLE No. : 18 THE MORPHIC TYPES AVAILABLE IN THE ROCK ART AND TRIBAL ART : A COMPARATIVE STUDY.

A = Absent
LEGEND:
P = Present

Motif types	R O C K A R T			T R I B A L A R T		
	Pachuarhi	Ulap	Isco	Juang	Saora	Korku
I. ZOOMORPH						
1. Bee (with beehive)	P	A	A	A	P	A
2. Scorpion	A	A	A	A	P	A
3. Tortoise	A	A	P	A	A	A
4. Lizard	A	A	A	A	P	A
5. Snake	A	A	A	A	P	A
6. Fish	P	A	A	P	P	A
7. Crocodile	A	A	A	P	P	A
8. Peacock	P	A	A	P	P	A
9. Duck	A	A	A	A	P	A
10. Fowl/Hen	P	A	A	A	P	A
11. Other birds	P	A	A	P	P	A
12. Bull/ox	P	A	A	P	P	A
13. Bison	P	P	P	A	P	A
14. Deer	P	A	P	P	P	P
15. Horse	P	A	A	P	P	P
16. Elephant	P	A	A	P	P	A
17. Rhinoceros	P	A	P	A	A	A
18. Goat	A	A	A	P	A	P
19. Cow	P	P	P	P	P	P

Contd.

Contd. T-18.

Motif types	R O C K A R T			T R I B A L A R T		
	Pachmarhi	Ulap	Isco	Jhang	Saora	Korku
20. Tiger	P	A	A	P	P	A
21. Dog	P	A	A	A	P	A
22. Hare	A	A	A	A	P	A
23. Bear	P	A	A	A	P	A
24. Monkey	P	A	A	A	P	A
25. Lion	P	A	A	A	A	A
26. Other carnivores	P	A	A	A	A	A
27. Spider	P	A	A	A	A	A
28. Porcupine	P	A	A	A	A	A
29. Vulture	P	A	A	A	A	A
30. Other bovids	P	A	A	A	A	A
31. Unidentified quadrupeds	P	P	P	P	P	P
II. ANTHROPOMORPH						
1. Copulating pair	A	A	A	A	P	A
2. Group dance	P	A	A	P	P	P
3. Woman with child	P	A	A	P	A	A
4. Man guiding horse rider	P	A	A	A	P	P
5. Supernatural being with multiple hands and head	A	A	A	A	P	A
6. Elephant headed (Ganesh)	A	A	A	P	A	A
7. Patient	A	A	A	A	P	A
8. Treatment of patient	A	A	A	A	P	A

Contd.

Motif types	R O C K A R T			T R I B A L A R T		
	Pachmarhi	Ulap	Isco	Juang	Saora	Korku
9. Motif of female breasts	A	A	A	P	A	A
10. Man in disguise of a lion	P	A	A	A	A	A
[III. ANTHROPOMORPH WITH ZOOMORPH AND MATERIAL TRAIT						
1. Elephant rider with tools.	P	A	A	P	P	A
2. Horse rider with tools	P	A	A	P	P	P
3. Animal husbandry	P	A	A	A	P	P
4. Hunting with bow and arrow	P	A	A	P	P	P
5. Elephant/horse riders with umbrella	A	A	A	A	P	P
6. Sacrifice of animals	A	A	A	A	P	A
7. Cultivation, tilting soil	A	A	A	A	P	P
IV. ANTHROPOMORPH WITH MATERIAL TRAIT						
1. Holding gun	A	A	A	A	P	P
2. Sorcerer "Ojha" holding musical instruments	A	A	A	A	A	P
3. Holding sword	P	A	A	P	P	P
4. Holding knife/dagger	P	A	A	P	P	P
5. Woman with pot on head	A	A	A	P	P	P
6. Holding umbrella	P	A	A	A	P	P
7. Holding bag	A	A	A	A	A	P
8. Holding spade	A	A	A	A	A	P
9. Drummer	P	A	A	A	P	P
10. Holding stick/club	P	A	A	P	P	P

Contd.

Contd. T-18

Motif types	R O C K A R T			T R I B A L A R T		
	Pachmarhi	Ulap	Isco	Juang	Saora	Korku
11. Holding tobacco pipe	A	A	A	P	A	A
12. Musician playing flute/ horn	P	A	A	P	P	P
13. Musicians	P	A	A	P	P	P
14. Musician playing on harp	P	A	A	A	A	A
15. Carrying pot/basket	A	A	A	P	P	P
16. Anthropomorph with writing pose, sitting on chair	A	A	A	A	P	P
17. Man riding cycle	A	A	A	A	P	A
18. Bus with passengers	A	A	A	A	P	A
19. Trains with passengers	A	A	A	A	P	A
20. Man carried by palanquin	A	A	A	A	P	A
21. Aeroplane with passengers	A	A	A	A	P	A
22. Holding bow and arrow	P	A	A	P	P	P
23. Holding shield	P	A	A	A	P	A
24. Holding quiver	P	A	A	A	A	A
25. Holding axe	P	A	A	P	P	A
26. Holding spear	P	A	A	A	P	A
27. Wounded warrior	P	A	A	A	A	A
28. Carrying pole on shoulder	P	A	A	A	P	A
29. Man climbing	P	A	A	A	A	A
30. Holding flag	P	A	A	A	A	A
31. Holding wheel	P	A	A	A	A	A
32. Holding arrow	P	A	A	P	P	P
33. Holding bow	P	A	A	P	P	P
34. Anthropomorph under a shelter	P	A	A	A	A	P

Contd.

Contd. T-18

Motif types	R O C K A R T			T R I B A L A R T		
	Pachmarhi	Ulap	Isco	Juang	Saora	Korku
V. MATERIAL TRAIT						
1. Umbrella	P	A	A	A	P	P
2. Gun	A	A	A	A	P	P
3. Sword	P	A	A	P	P	P
4. knife/dagger	P	A	A	P	P	P
5. Pot/Basket	P	A	A	P	P	P
6. Bag	A	A	A	A	A	P
7. House/shelter	P	A	P	A	A	P
8. Drum	P	A	A	A	P	P
9. Spade	A	A	A	A	A	P
10. Bow and arrow	P	A	A	P	P	P
11. Club/stick	P	A	A	P	P	P
12. Axe	P	A	A	P	P	A
13. Tobacco-pipe	A	A	A	P	A	A
14. Flute/horn	P	A	A	P	P	P
15. Comb	A	A	A	A	P	P
16. Carrying pole	P	A	A	A	P	A
17. Shield	P	A	A	A	P	A
18. Spear	P	A	A	A	P	A
19. Quiver	P	A	A	A	A	A
20. Wheel	A	A	A	A	A	A
21. Harness	P	A	A	A	A	A
22. Ladder	P	A	A	A	A	A
23. Platform	P	A	A	A	A	A
24. Box	P	A	A	A	A	A

Contd.

Contd. T-18

Motif types	R O C K A R T			T R I B A L A R T		
	Pachmarhi	Ulap	Isco	Juang	Saora	Korku
25. Trap	P	A	A	A	A	A
26. Flag	P	A	A	A	A	A
27. Harp	P	A	A	A	A	A
VI. PHYTOMORPH						
1. Tree/Plant	P	A	A	P	P	P
2. "Shalpa" tree	A	A	A	A	P	A
VII. NATURAL OBJECT						
1. Sun	A	A	P	P	P	P
2. Moon	A	A	A	A	P	P
3. Star	A	A	A	A	P	A
VIII. NON-FIGURATIVE MOTIF	P	P	P	P	P	P
IX. INSCRIPTIONS	A	A	A	A	A	P

TABLE NO : 19 COMMON ELEMENTS OF MORPHIC TYPES FOUND IN ROCK ART
AND TRIBAL ART.

MORPHIC TYPES	FREQUENCY AND PERCENTAGE OF MOTIF-ELEMENTS IN EACH CATEGORY	ROCK ART	TRIBAL ART	COMMON ELEMENTS
Zoomorph	31 (26.05%)	24	23	12
Anthropomorph	11 (9.24%)	04	09	02
Anthropomorph, zoomorph and material cultu- re.	7 (5.88%)	04	07	04
Anthropomorph and material trait.	36 (30.26%)	21	27	14
Material trait	27 (22.69%)	23	18	14
Phytomorph	2 (1.68%)	01	02	01
Natural object	3 (2.52%)	01	03	01
Non-figurative motif.	1 (0.84%)	01	01	01
Inscription	1 (0.84%)	-	01	-
Frequency	119	79	91	49
Percentage	(100%)	66.39%	76.47%	41.18%

TABLE - 20
The type and numerical distribution of non-figurative paintings and engravings available in different sectors of the Isco rock art site.

Types of non-figurative art.	Sector-wise numerical distribution of rock art.						Total No.	% (within Total no. of non-figurative art.
	A	B	C	D	E	F		
1	—	—	2	1	1	—	4	0.95
2	2	6	2	—	—	1	11	2.60
3	—	—	—	4	—	—	4	0.95
4	—	1	2	3	2	—	8	1.89
5	—	—	7	5	1	1	14	3.31
6	—	—	—	—	1	—	1	0.24
7	—	2	—	—	1	—	3	0.71
8	—	—	1	—	—	—	1	0.24
9	—	—	—	—	2	—	2	0.47
10	—	—	8	—	2	—	10	2.36
11	2	23	93	45	15	23	201	47.52
12	—	—	—	1	—	—	1	0.24
13	—	—	—	3	—	—	3	0.71
14	—	1	—	—	—	—	1	0.24
15	1	—	1	7	1	—	10	2.36
16	—	—	2	—	—	—	2	0.47
17	—	4	5	1	2	1	13	3.07
18	—	1	3	1	1	1	7	1.65
19	—	3	—	—	—	—	3	0.71
20	1	1	2	—	—	—	4	0.95
21	—	—	7	—	—	—	7	1.65
22	—	—	—	1	1	—	2	0.47
23	—	1	9	1	—	—	11	2.60
24	—	2	2	6	2	—	12	2.84
25	—	3	2	—	2	—	7	1.65
26	—	—	1	—	—	—	1	0.24
27	2	6	1	2	1	1	13	3.07
28	—	—	4	—	—	—	4	0.25
29	—	1	1	—	—	—	2	0.47
30	—	1	—	—	—	—	1	0.24
31	—	—	7	—	—	—	7	1.65
32	—	—	2	—	—	—	2	0.47
33	—	—	1	—	—	—	1	0.24
34	—	1	—	—	—	—	1	0.24
35	—	1	—	1	—	1	3	0.71
36	—	—	1	—	—	—	1	0.24
37	—	1	2	—	—	—	3	0.71
38	—	1	1	9	—	—	11	2.60
Other unclassified category	—	—	3	2	1	1	7	1.65
Total Number	8	60	165	93	36	30	392	100

GRAPHS

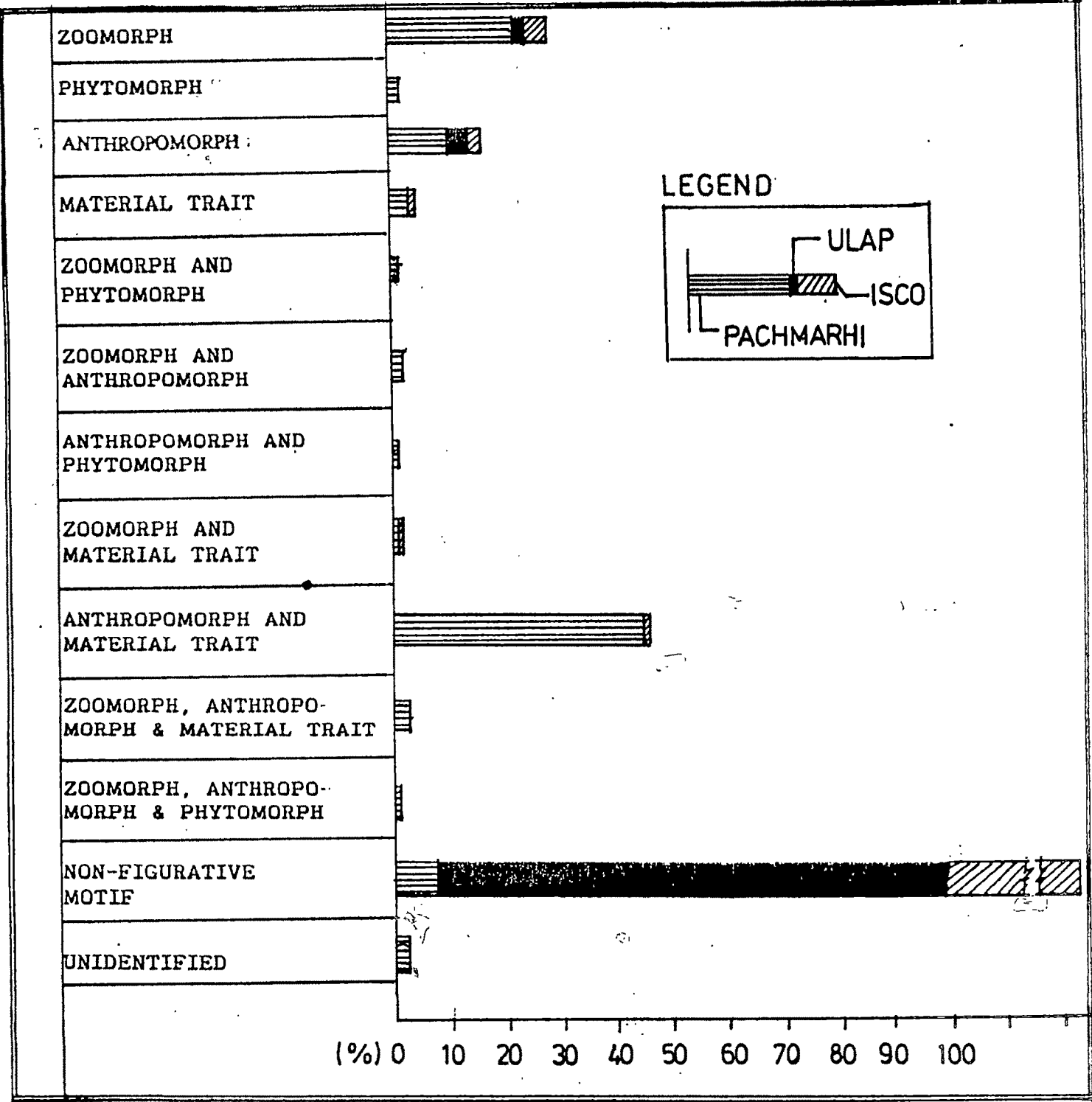


Diagram 1 : Different morphic types of rock art in three localities under study

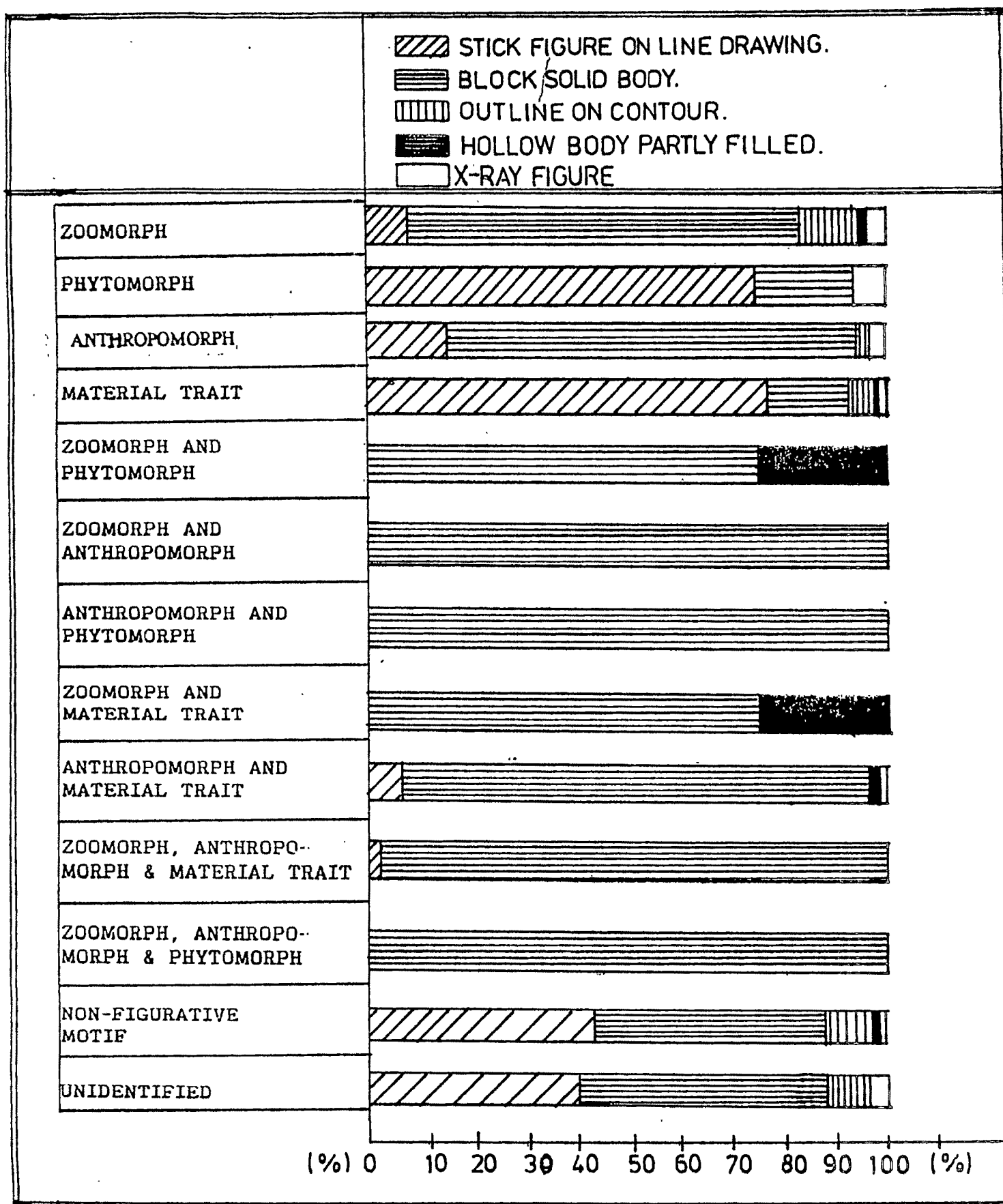


Diagram 2 : Different morphic types and varied executed styles in the motifs of rock art, Pachmarhi

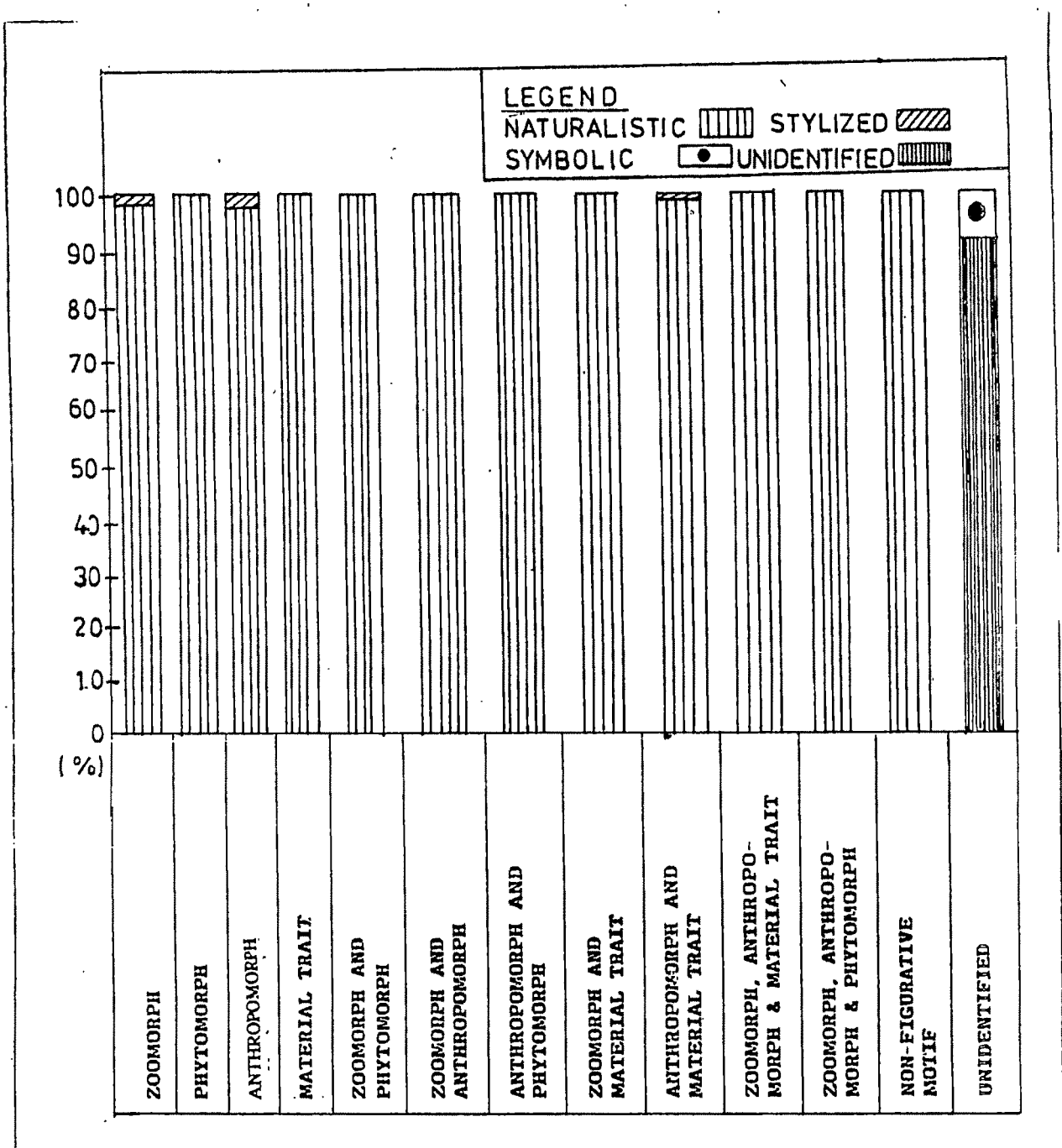


Diagram 3 : Morpho-typological classes and corresponding forms of execution of rock art motifs, Pachmarhi

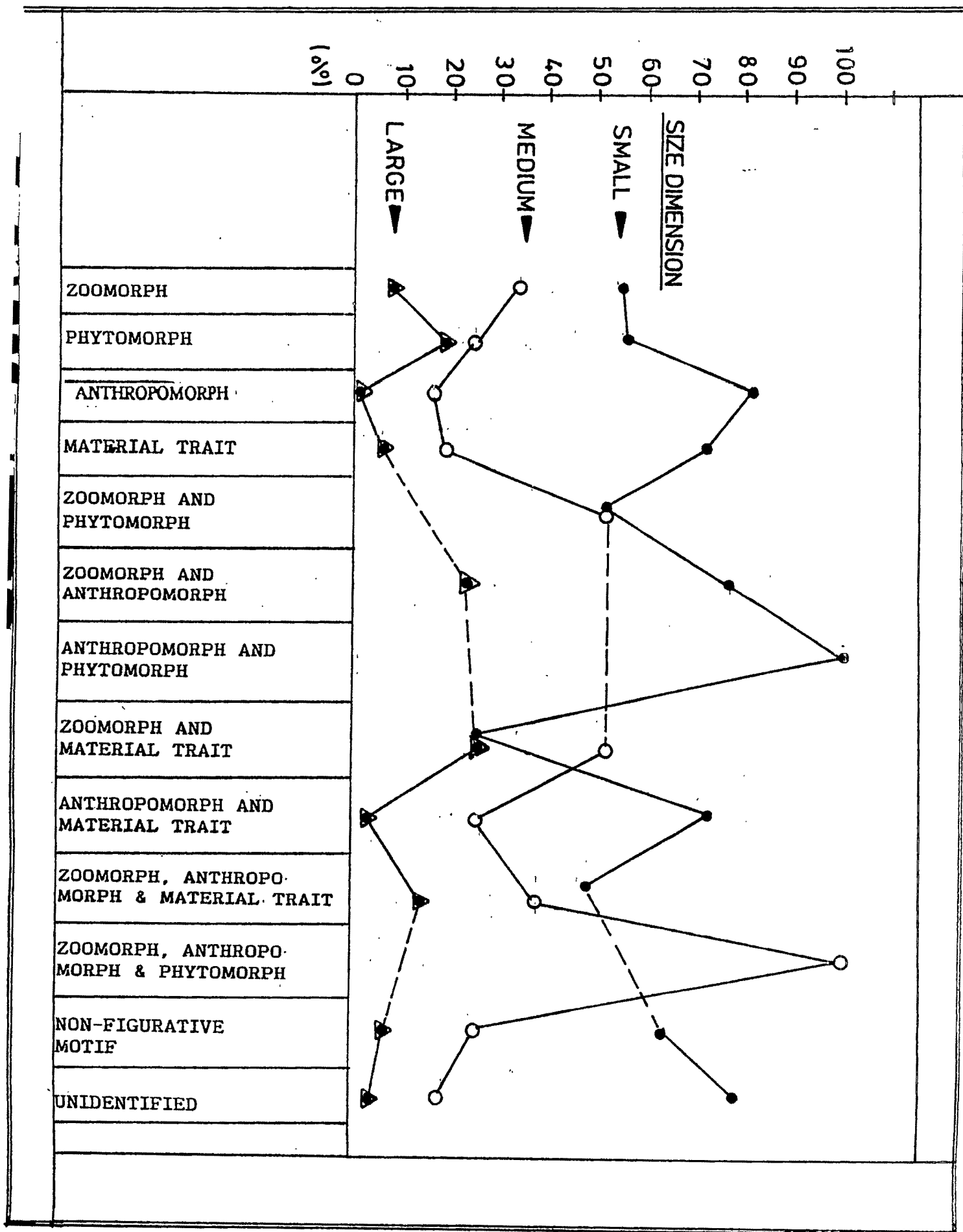


Diagram 4 : Morphic types and metric dimensional variables along with major axis

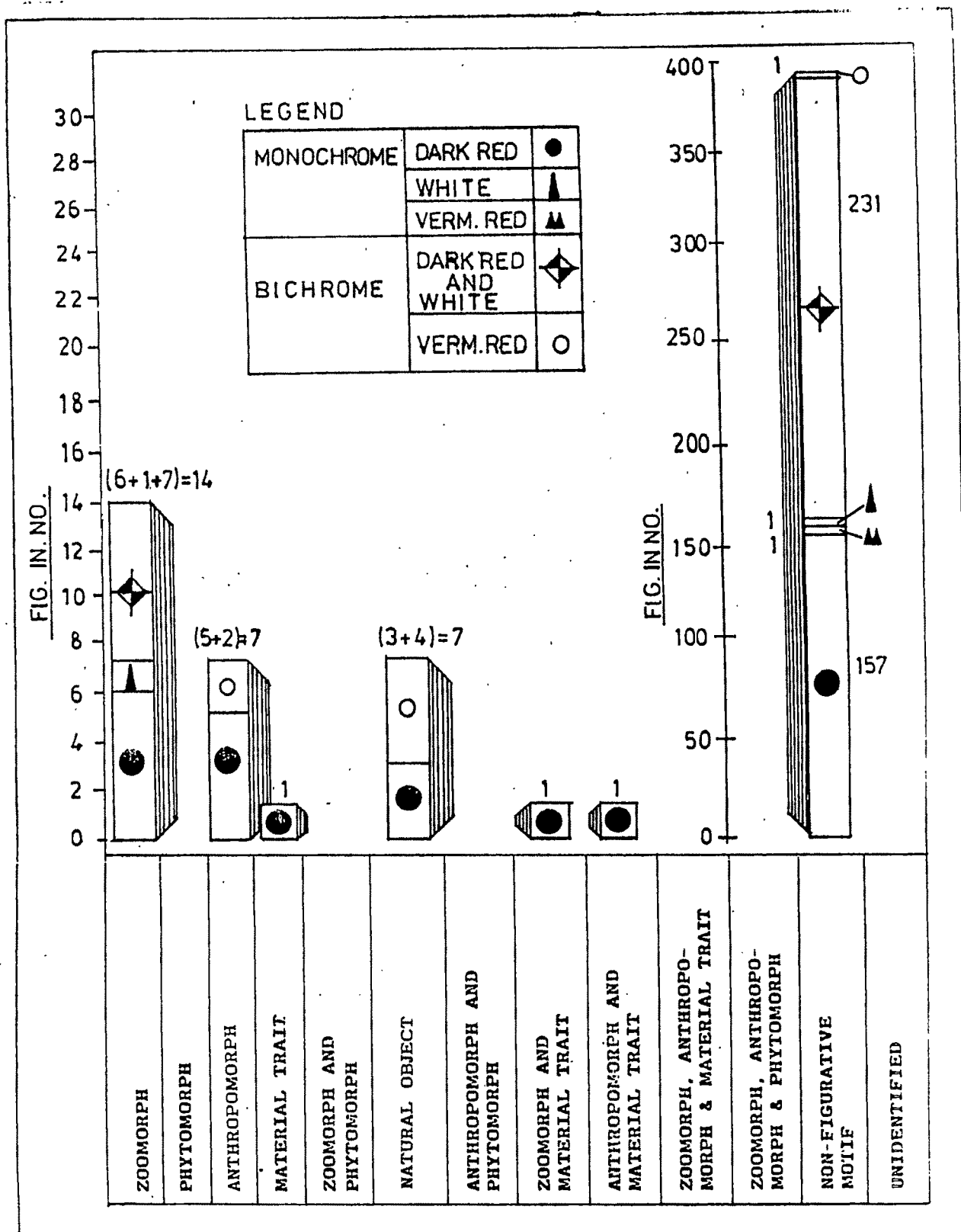


Diagram 5 : Colour-scheme and rock art motifs in Pachmarhi

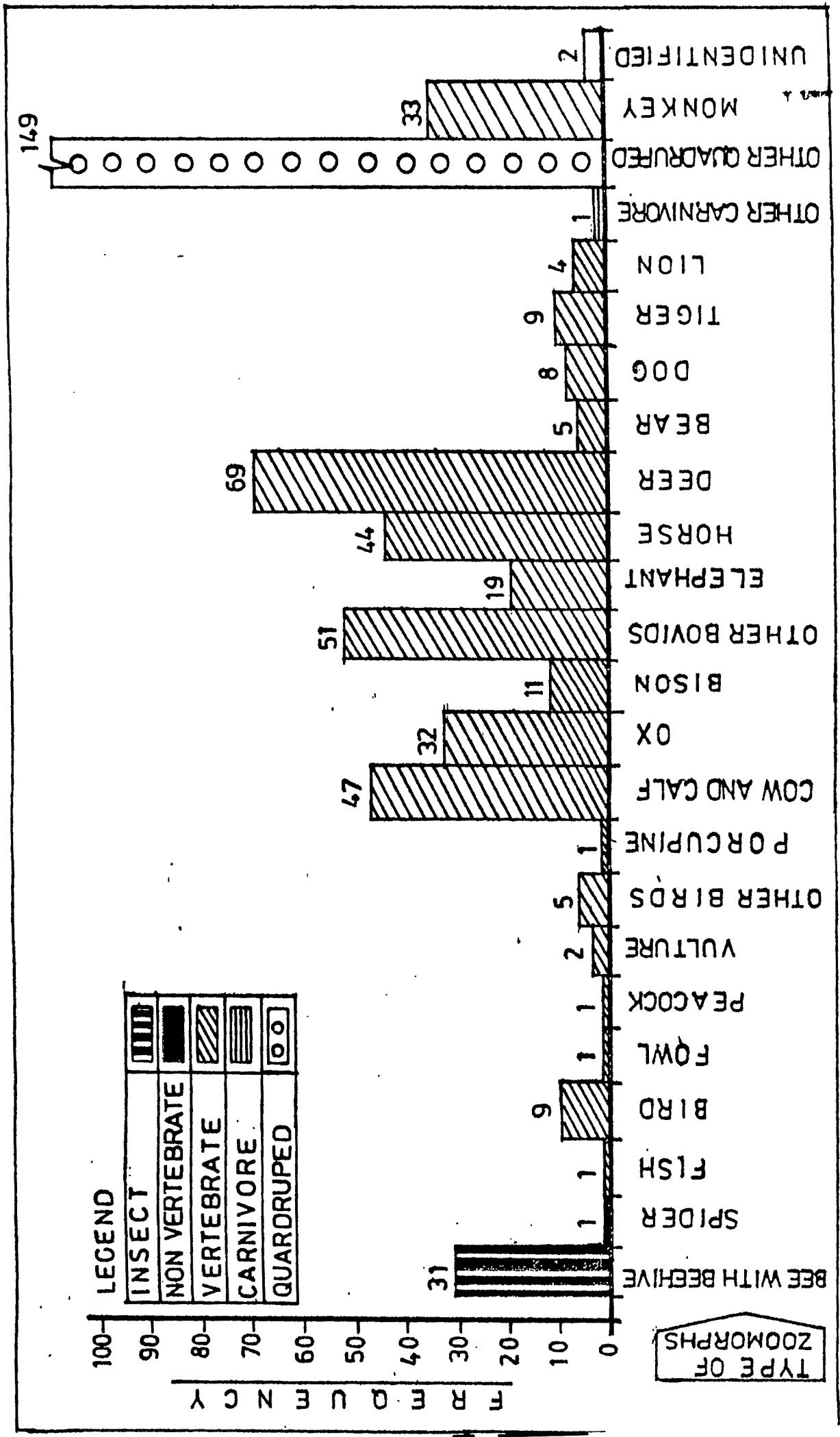


Diagram 6 : Frequency estimates of different zoomorphic types depicted in the rock art, Pachmarhi

FIGURES -

Maps & Sections

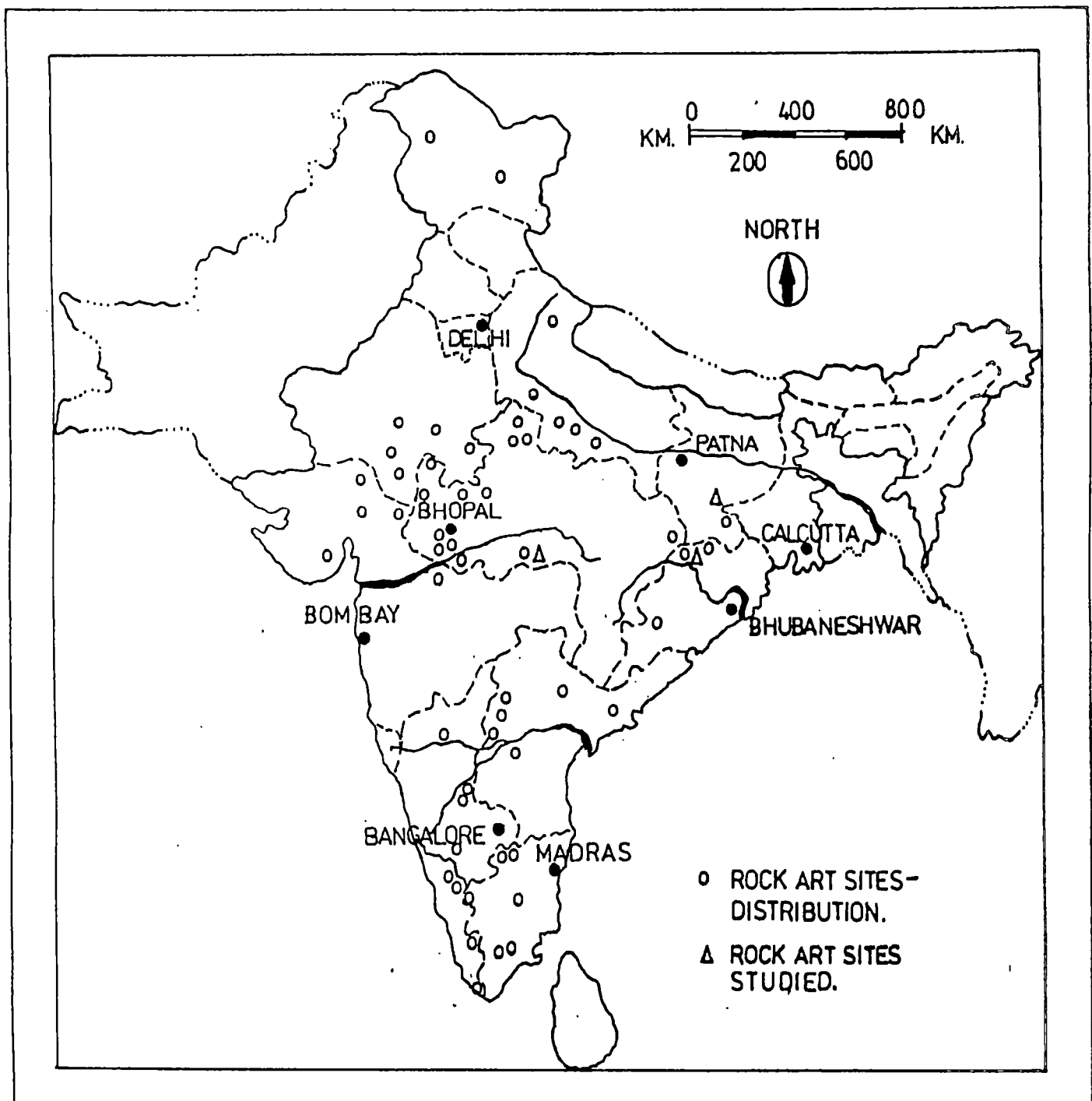


Fig. 1 : Distribution of rock art sites in India

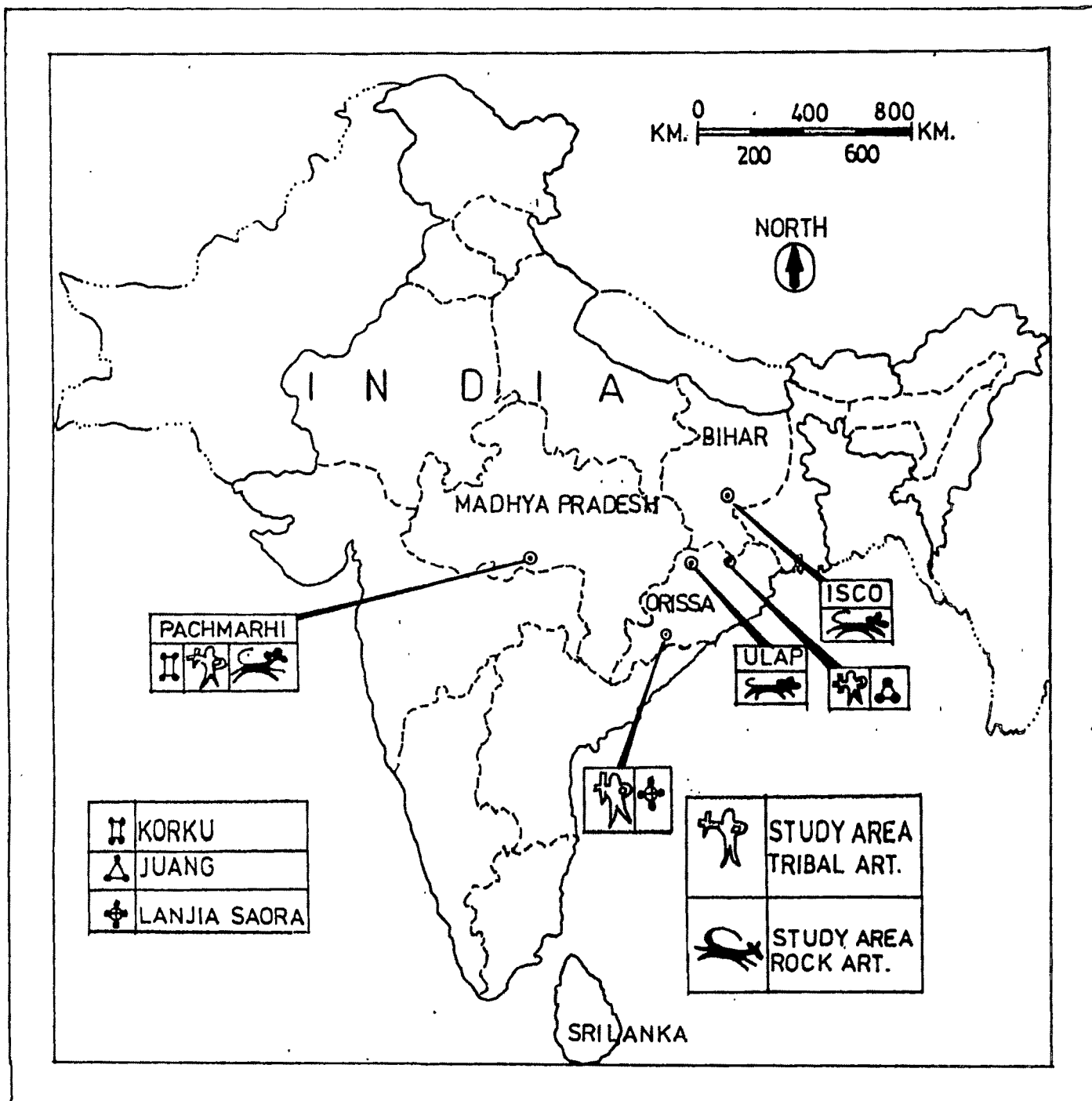


Fig. 2 : Map showing the areas of rock art and tribal art under study

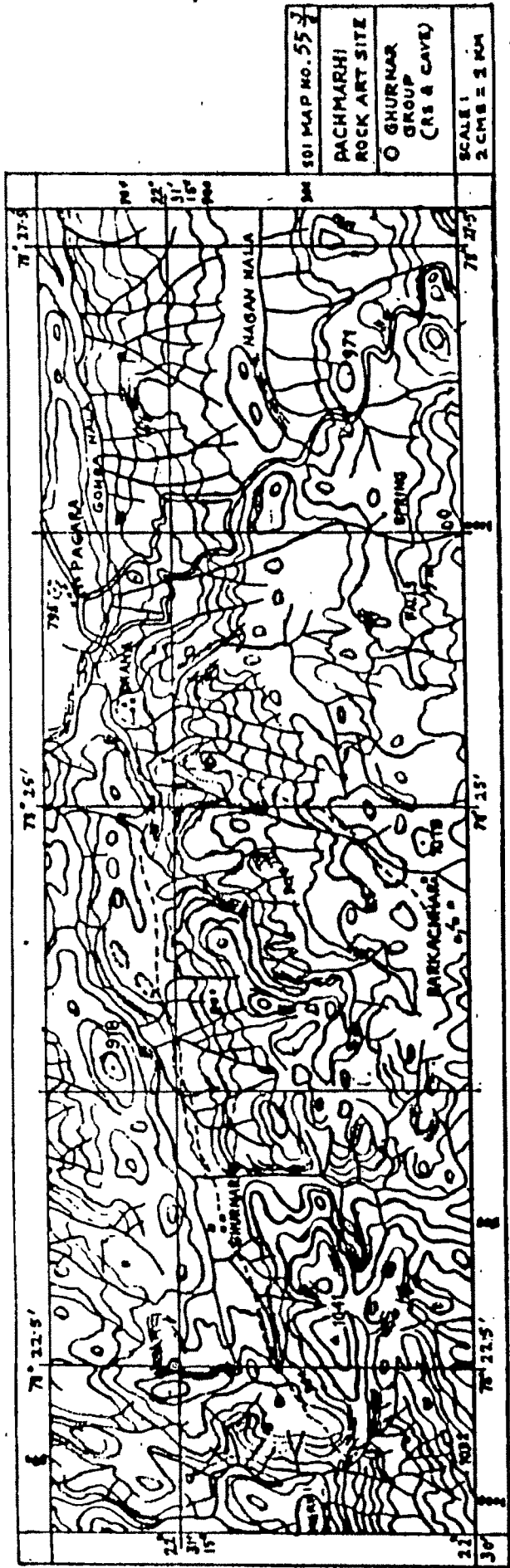


Fig. 4 : Map showing the rock art sites in northern extension
, of Pachmarhi locale.

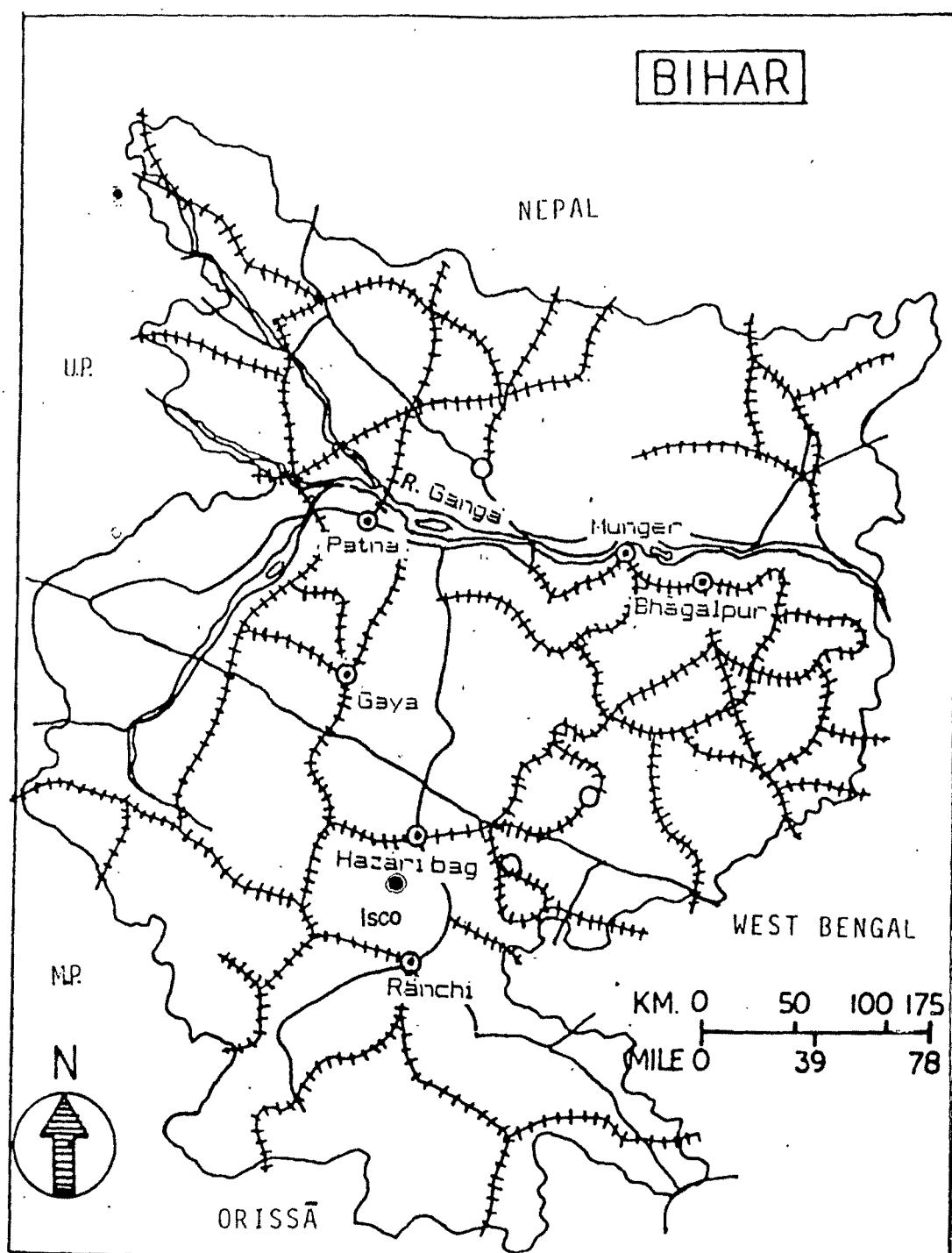


Fig. 5 : Position of rock art site (Isco) in Bihar

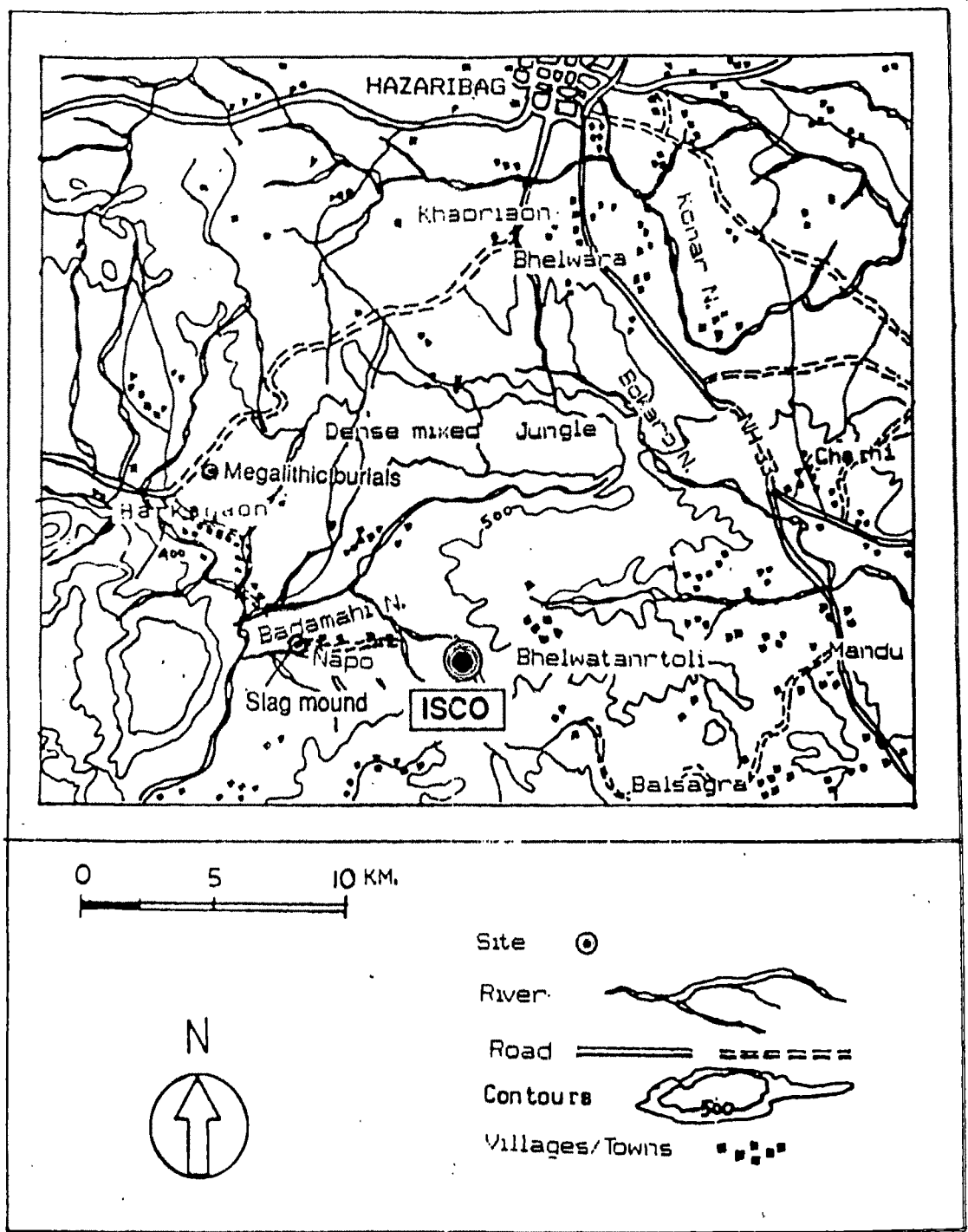


Fig. 6 : Detailed positional map of Isco site, Bihar

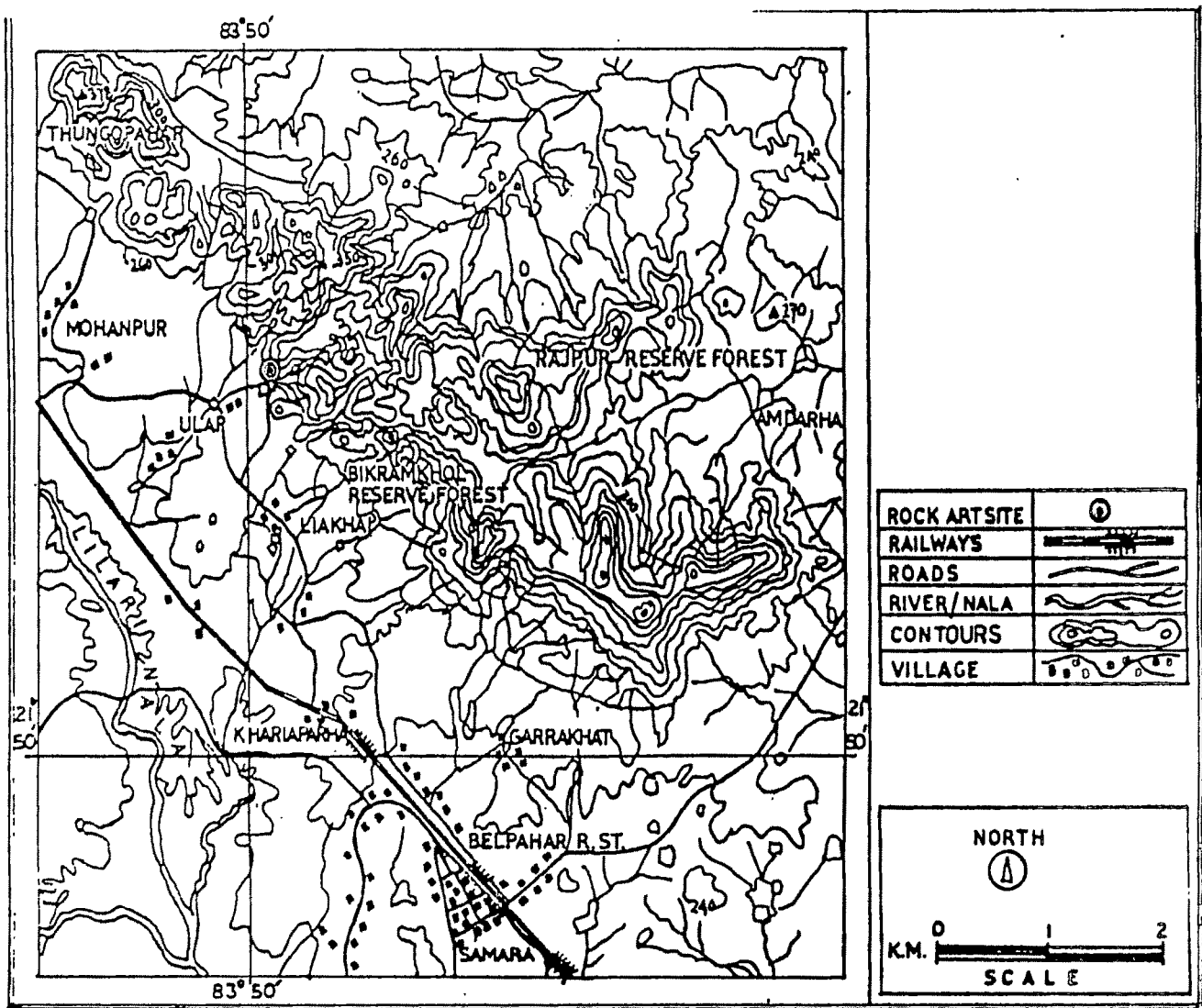


Fig. 7 : Position of Ulap rock art site, Orissa

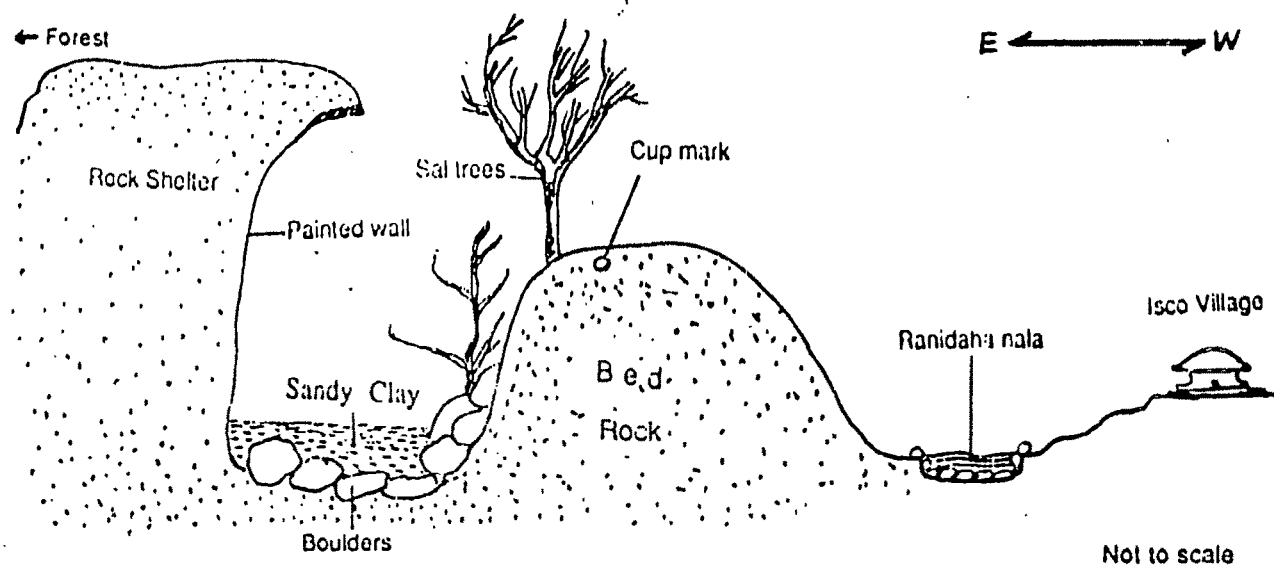


Fig. 8 : Transverse section at Isco rock art site

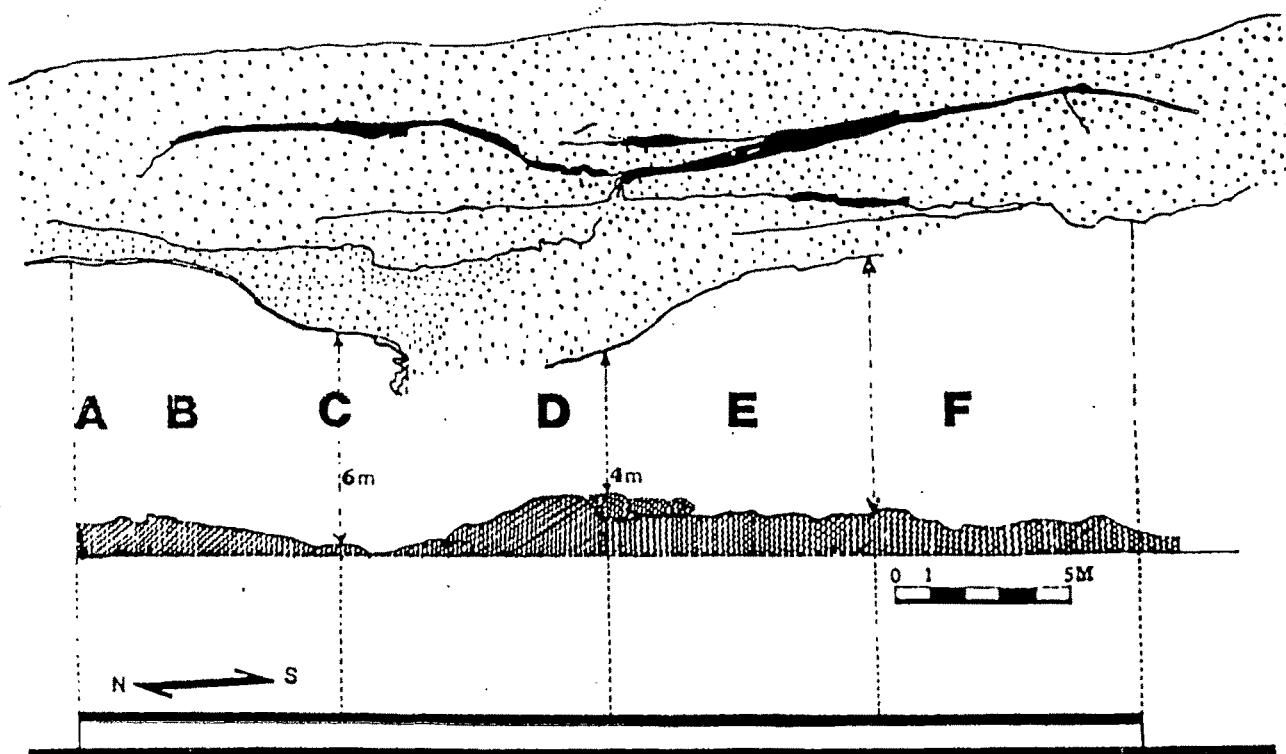
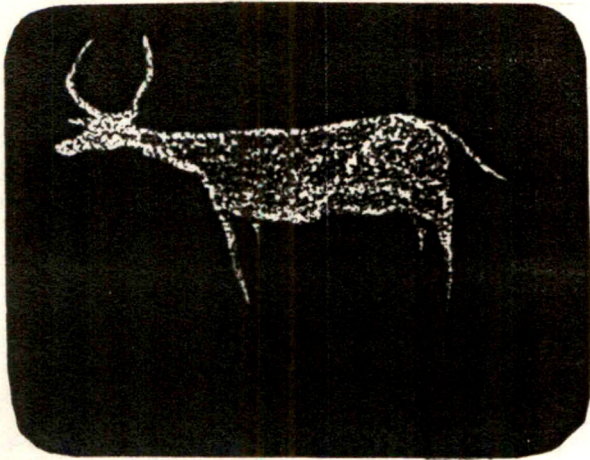
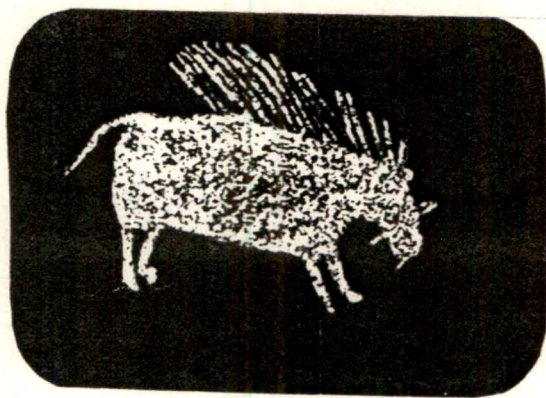


Fig. 9 : Schematic section at Isco painted rock shelter, showing different sectors

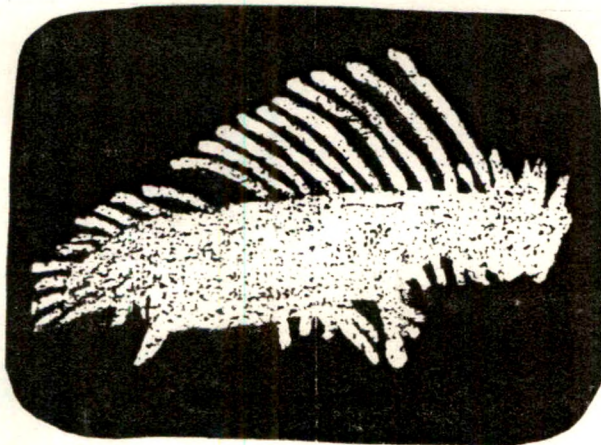
PHOTO REPLICATION



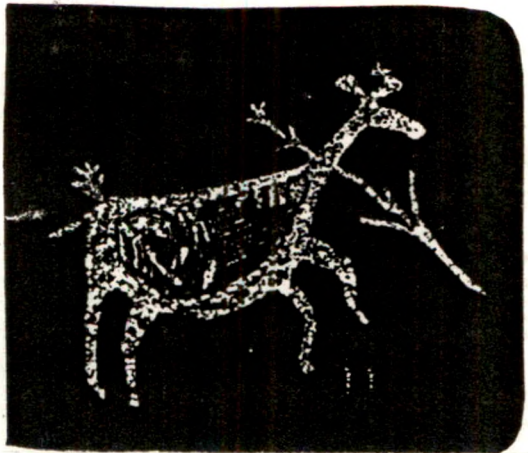
1. Cow, Jambudip, Pachmarhi.



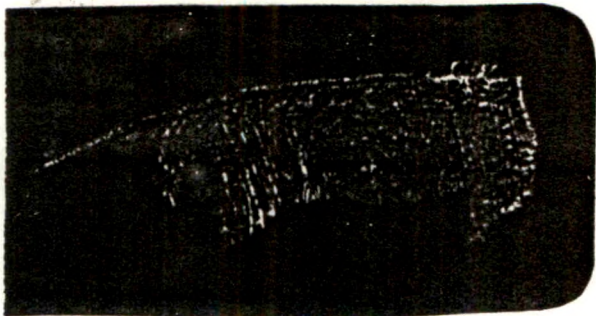
2. Wild bear/boar, Jambudip,
Pachmarhi.



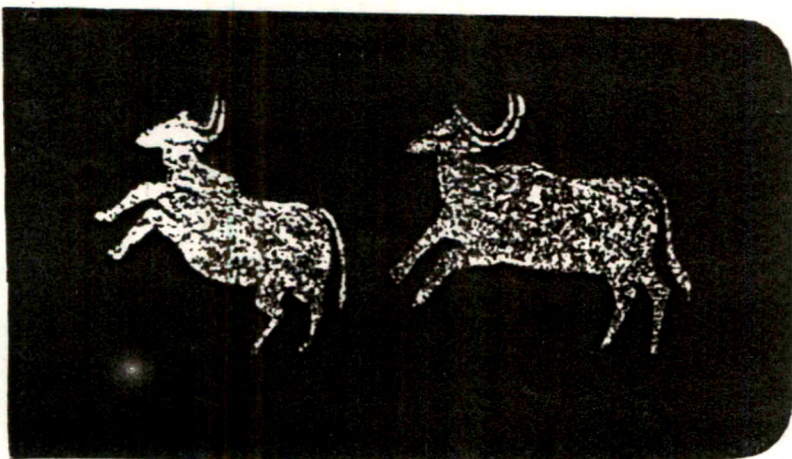
3. Porcupine, Jambudip, Pachmarhi.



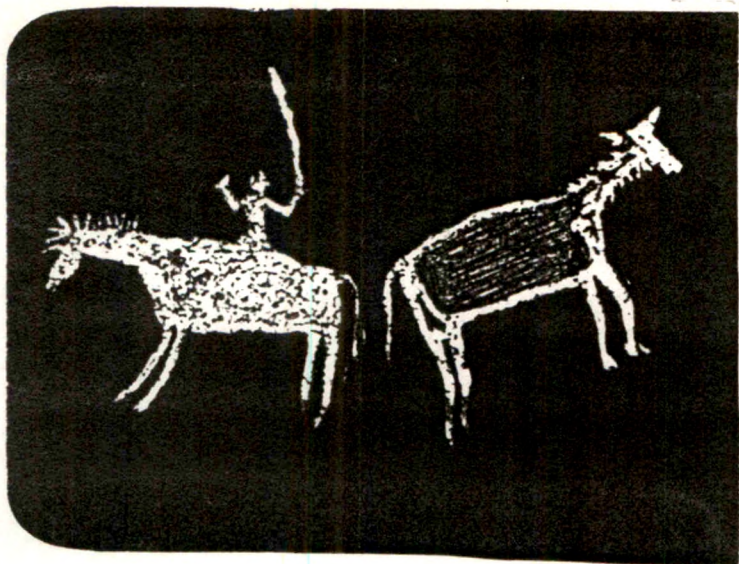
4. A deer struck by arrow with partial X-ray painting, Jambudip, Pachmarhi.



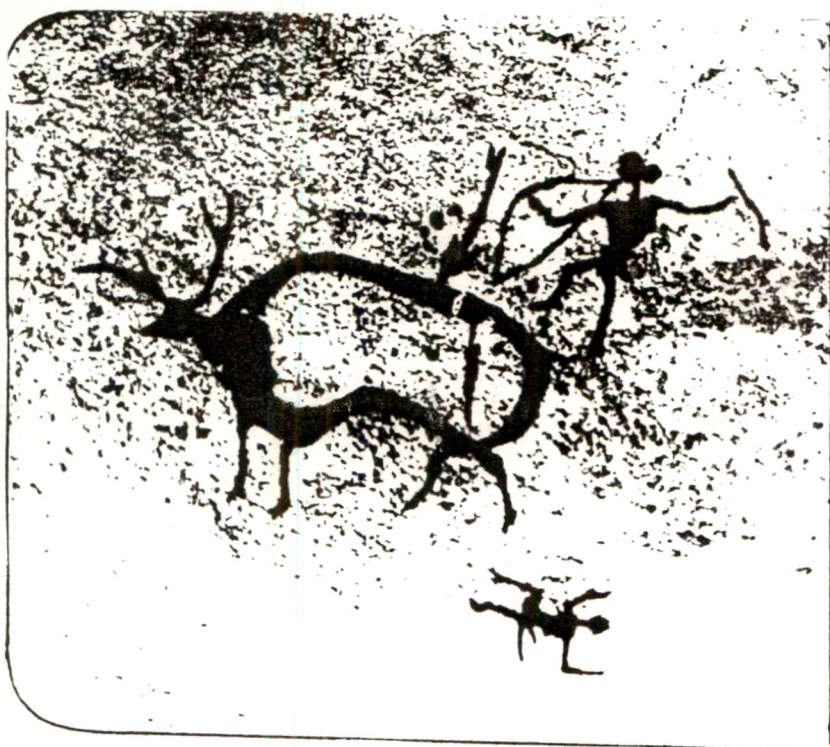
5. Hinder part of the body of a quadruped, Bania Bauri, Pachmarhi.



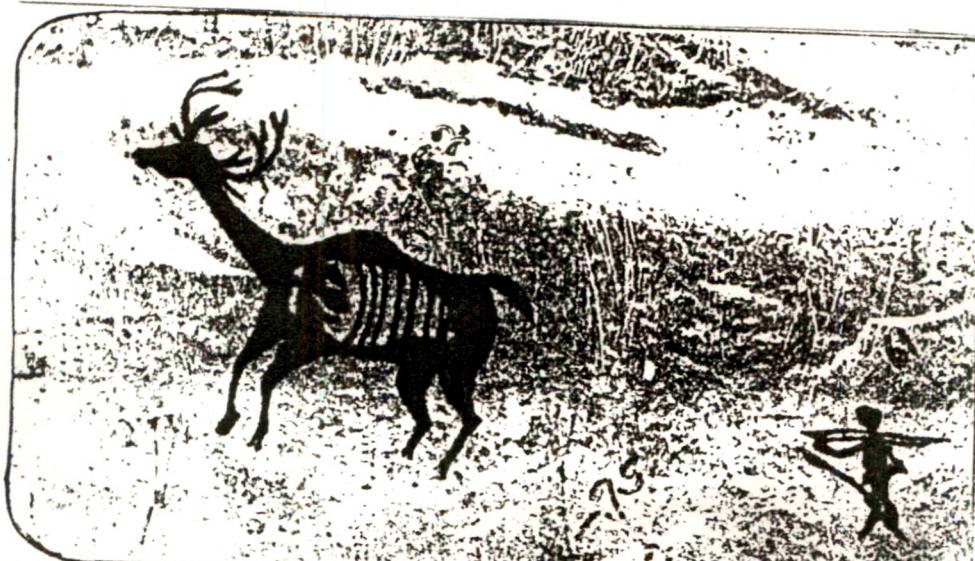
6. Two oxen, Mahadeo, Pachmarhi.



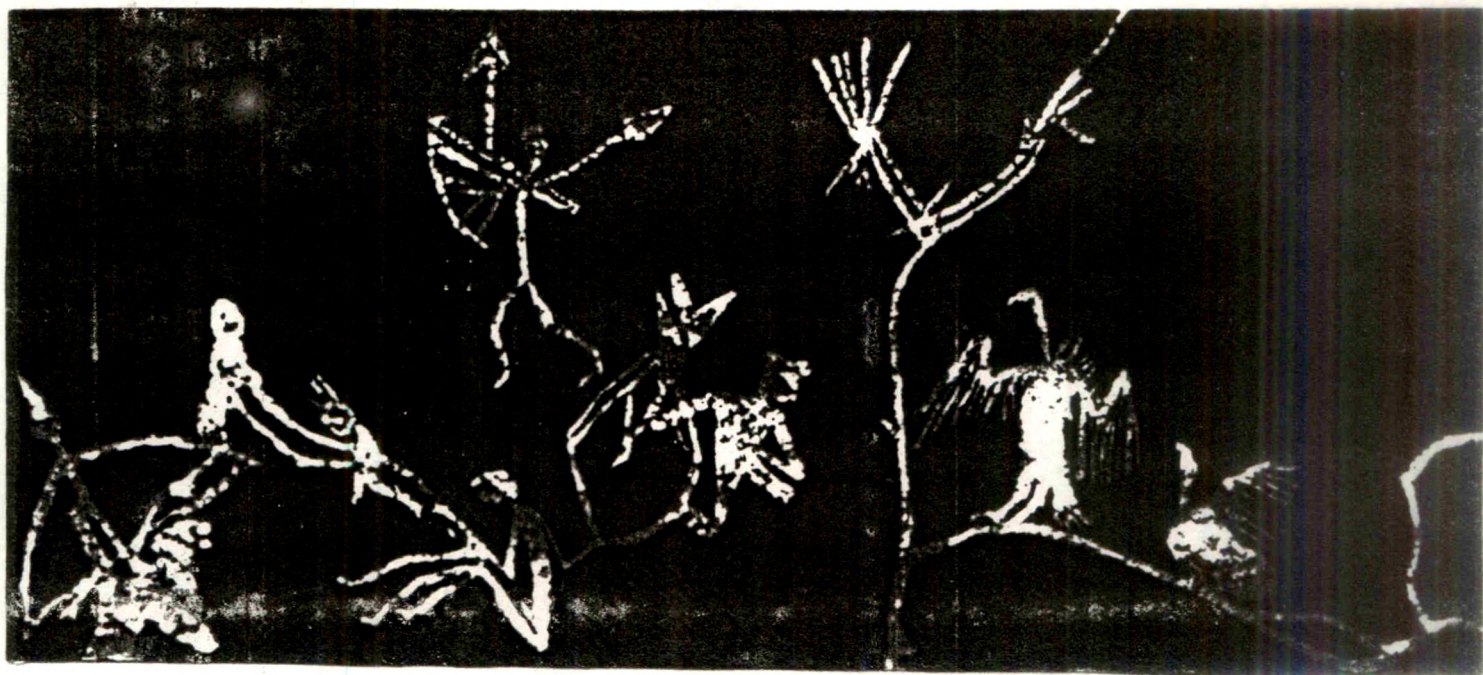
7. Horses and its rider,
Jambudip, Pachmarhi.



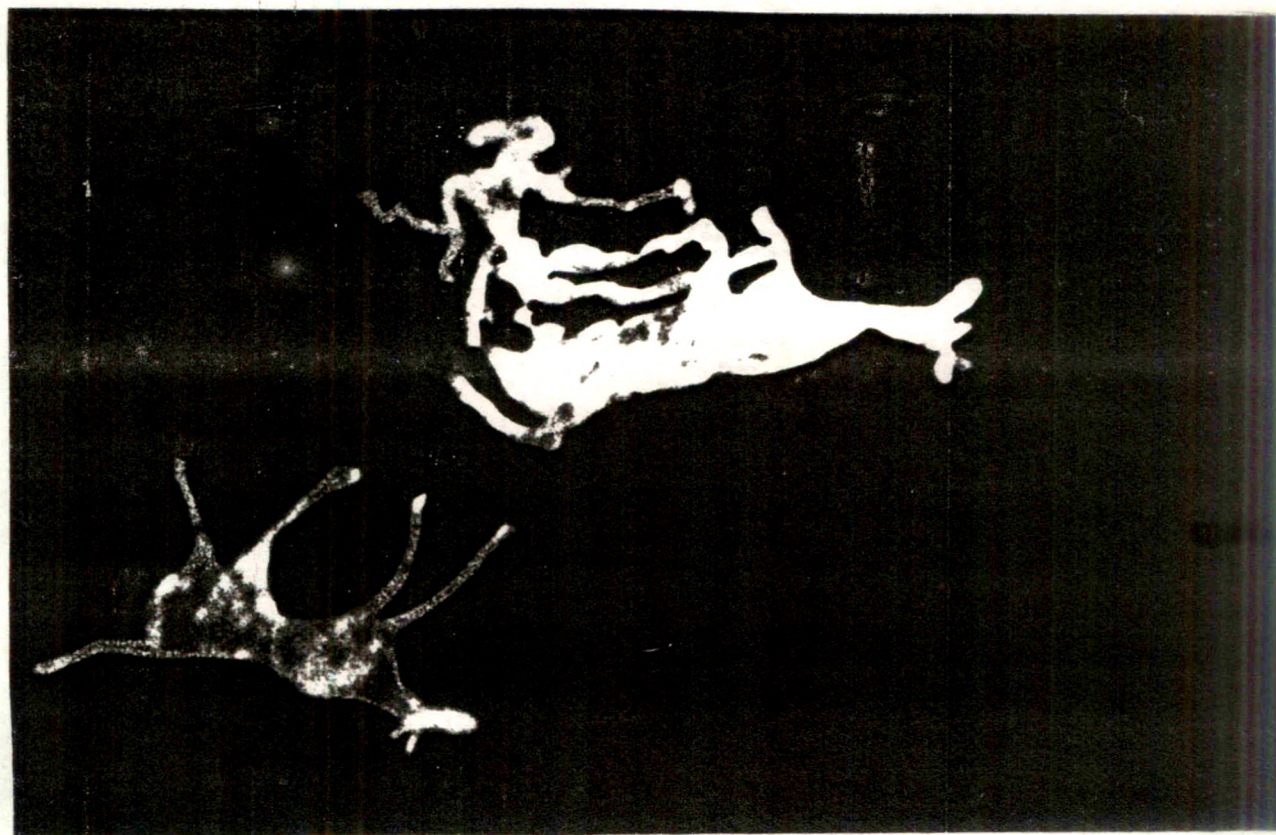
8. Archer hunting a deer
or Sambar, Bainganga,
Pachmarhi.



9. Hunter chasing a
deer, Mahadeo,
Pachmarhi.



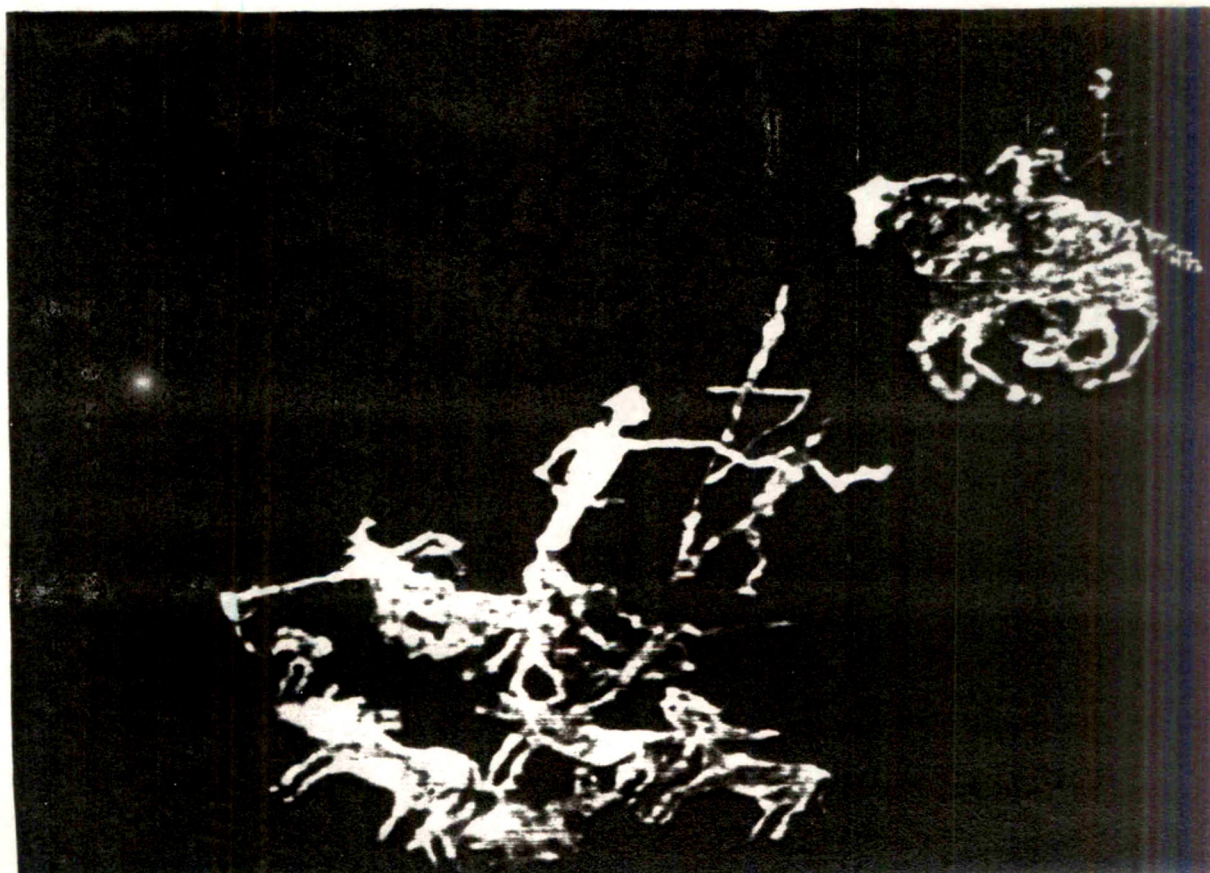
10. Vultures in the battlefield, Imli Khoh, Pachmarhi.



11. Man skinning a hunted deer, Ghurnar, Pachmarhi.



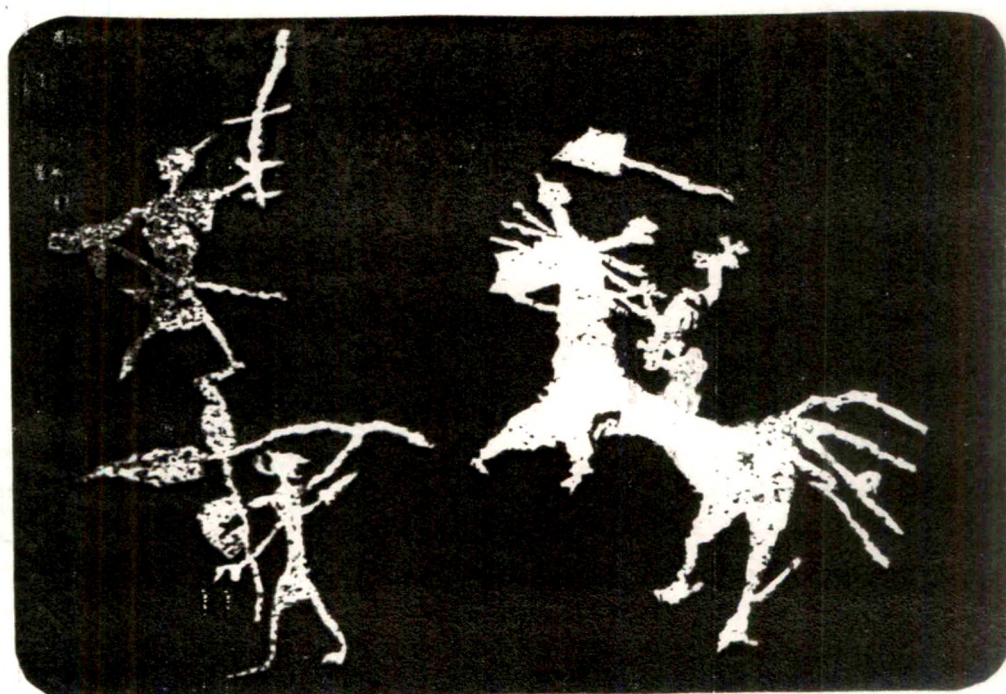
12. A quadruped, body filled with intricate design,
Ghurnar, Pachmarhi.



13. Herd of animals being protected by armed men,
Ghurnar, Pachmarhi.



14. Non-figurative motifs and human figure superimposed, Maradeo, Pachmarhi.



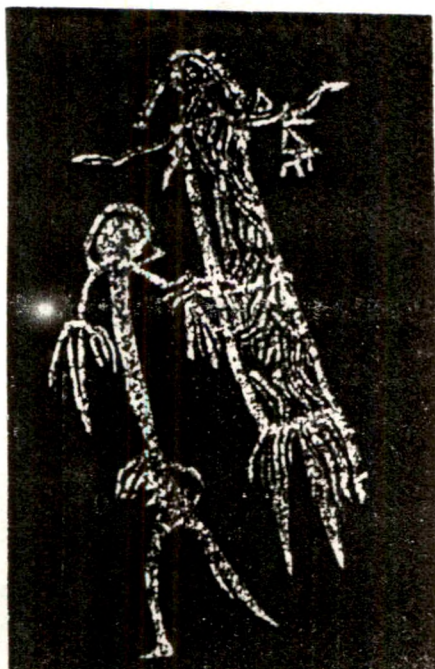
15. Scene of feud, Ghurnar, Pachmarhi.



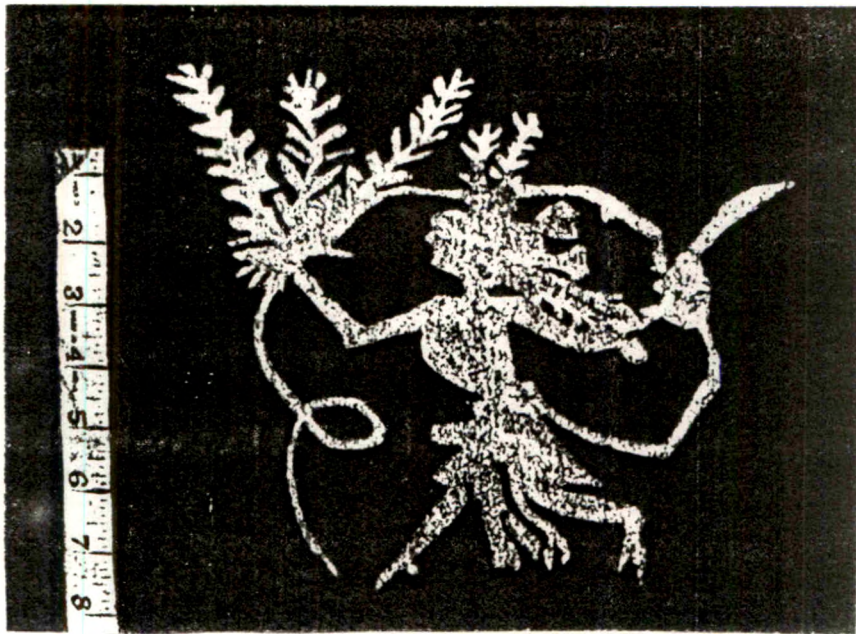
16. Breastfeeding mother (centre) and man with carrying pole.



17. Archer, Jambudip, Pachmarhi.



18. Stylized human figures, Jambudip, Pachmarhi.



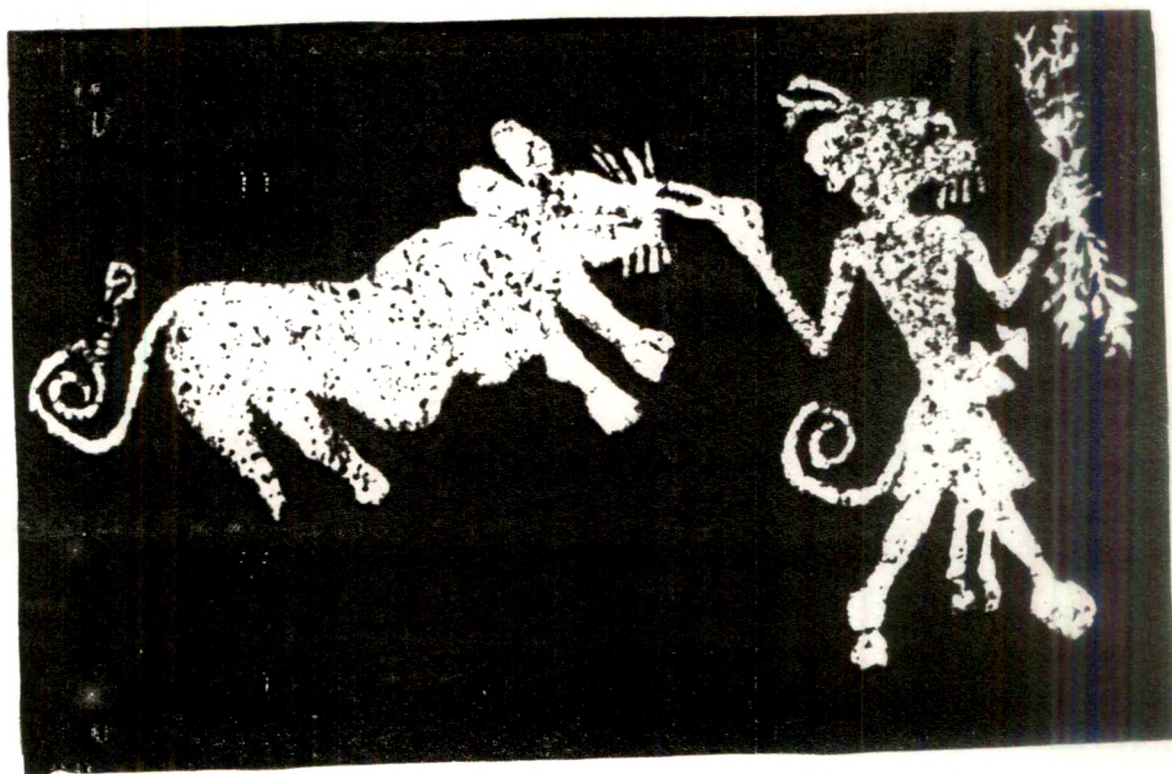
19. Person, with prominent nose, holding arms, Ghurnar, Pachmarhi.



20. A plant, elephant rider and man with ladder, Ghurnar, Pachmarhi.



21. Battle scene, Ghurnar, Pachmarhi.



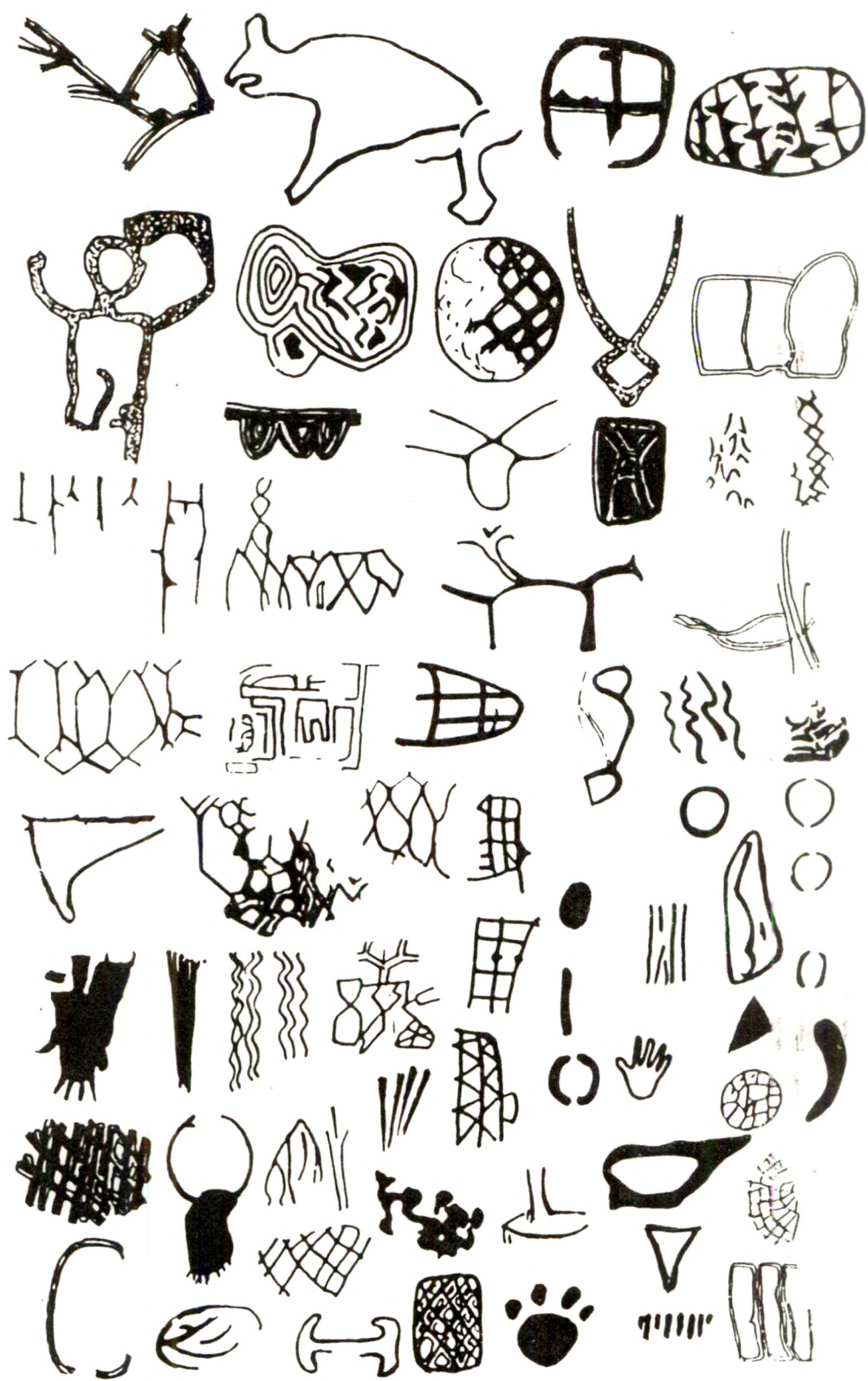
22. A lion and a human-like armed figure in disguise of a lion, Dorothy Deep, Pachmarhi.



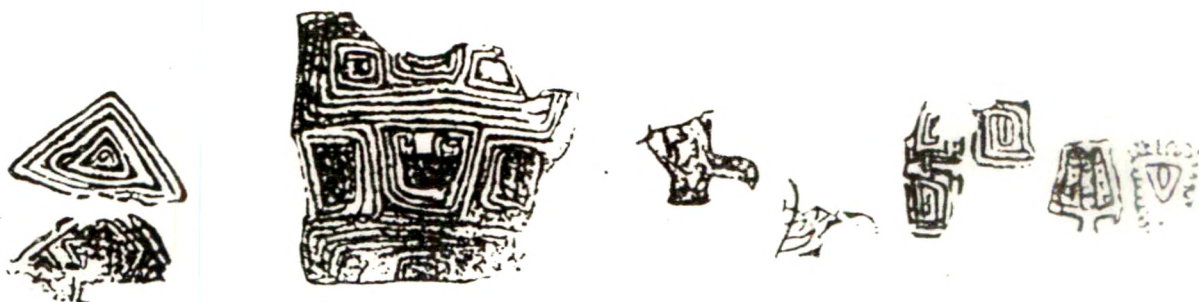
23. Scene of a battlefield with a horserider at the centre, Maradeo, Pachmarhi.



24. Cluster, principal non-figurative motifs,
Pachmarhi locality.



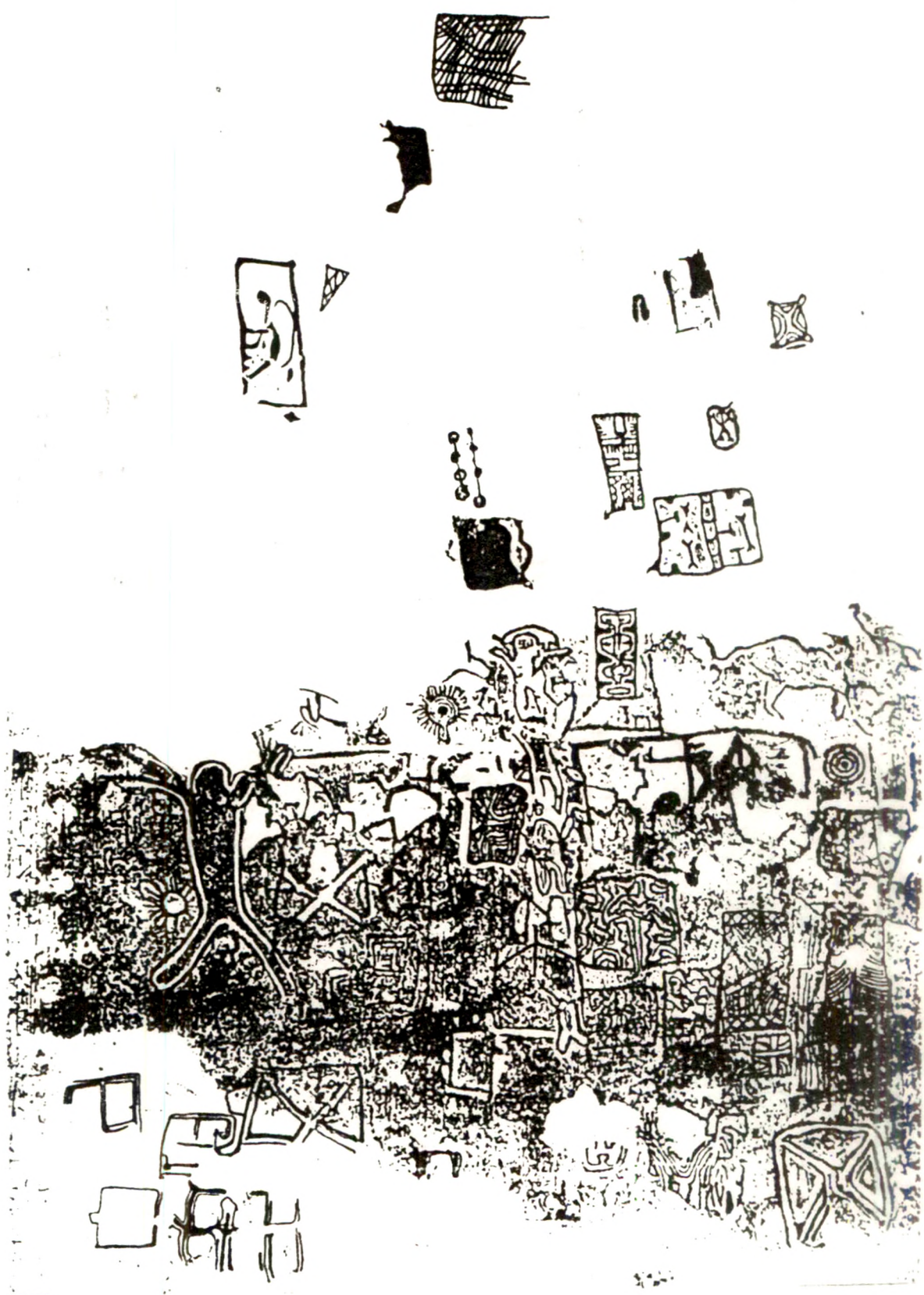
25. Assorted principal motifs, Ulap, Orissa.



26. Panel of rock art in sector A, Isco.



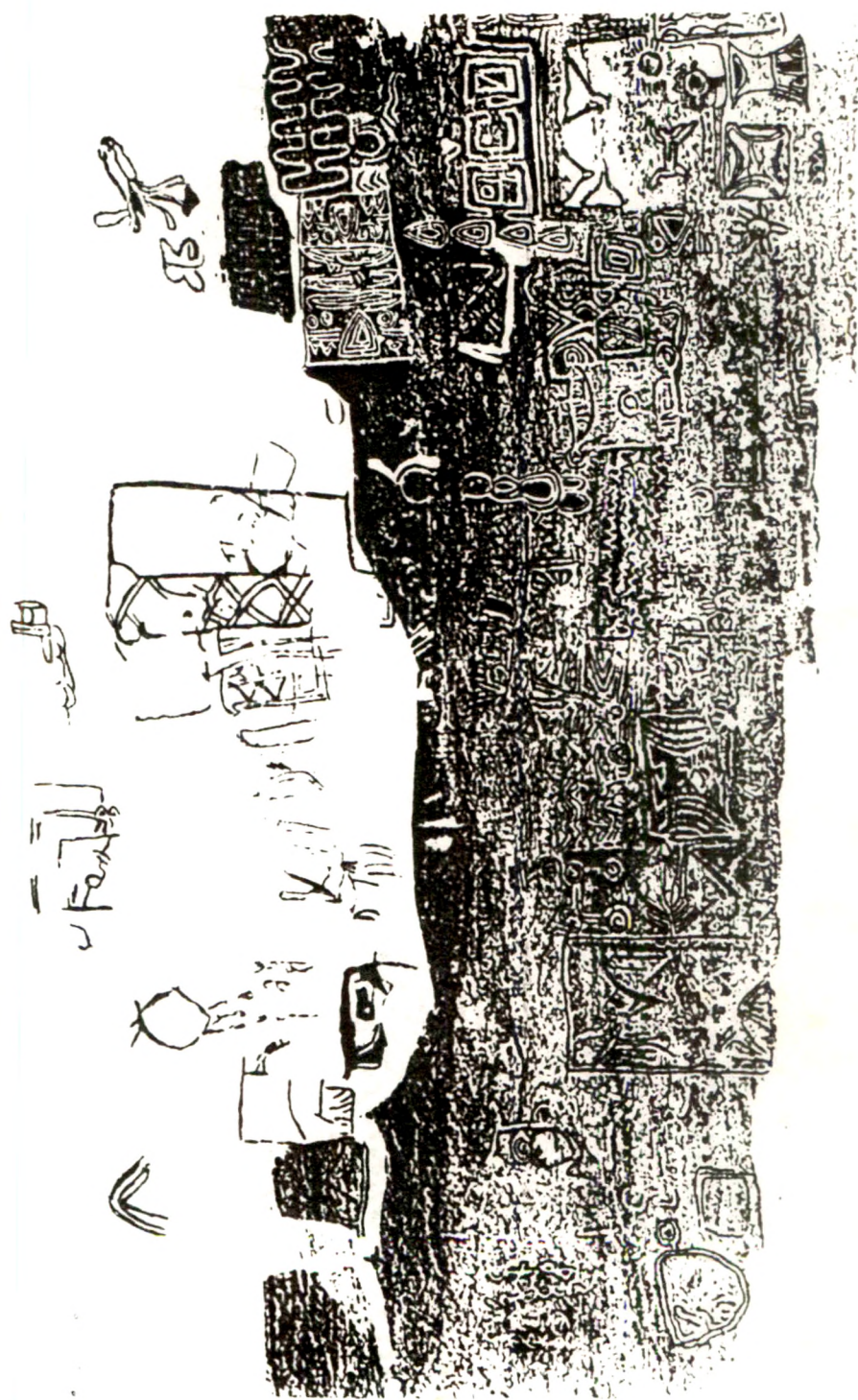
27. Panel of rock art in sector B, Isco.



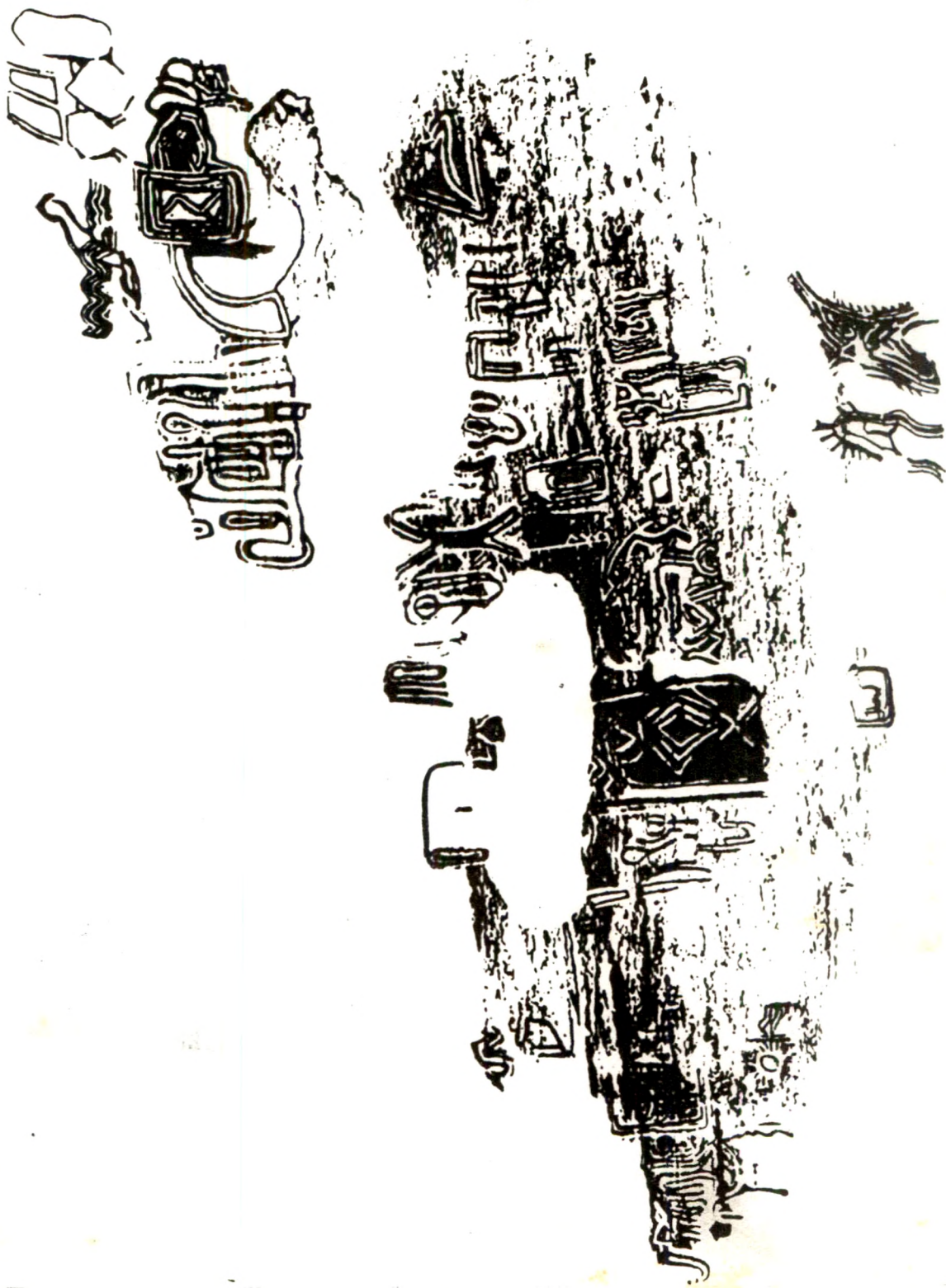
28. Panel of rock art in northern part of sector C, Isco.



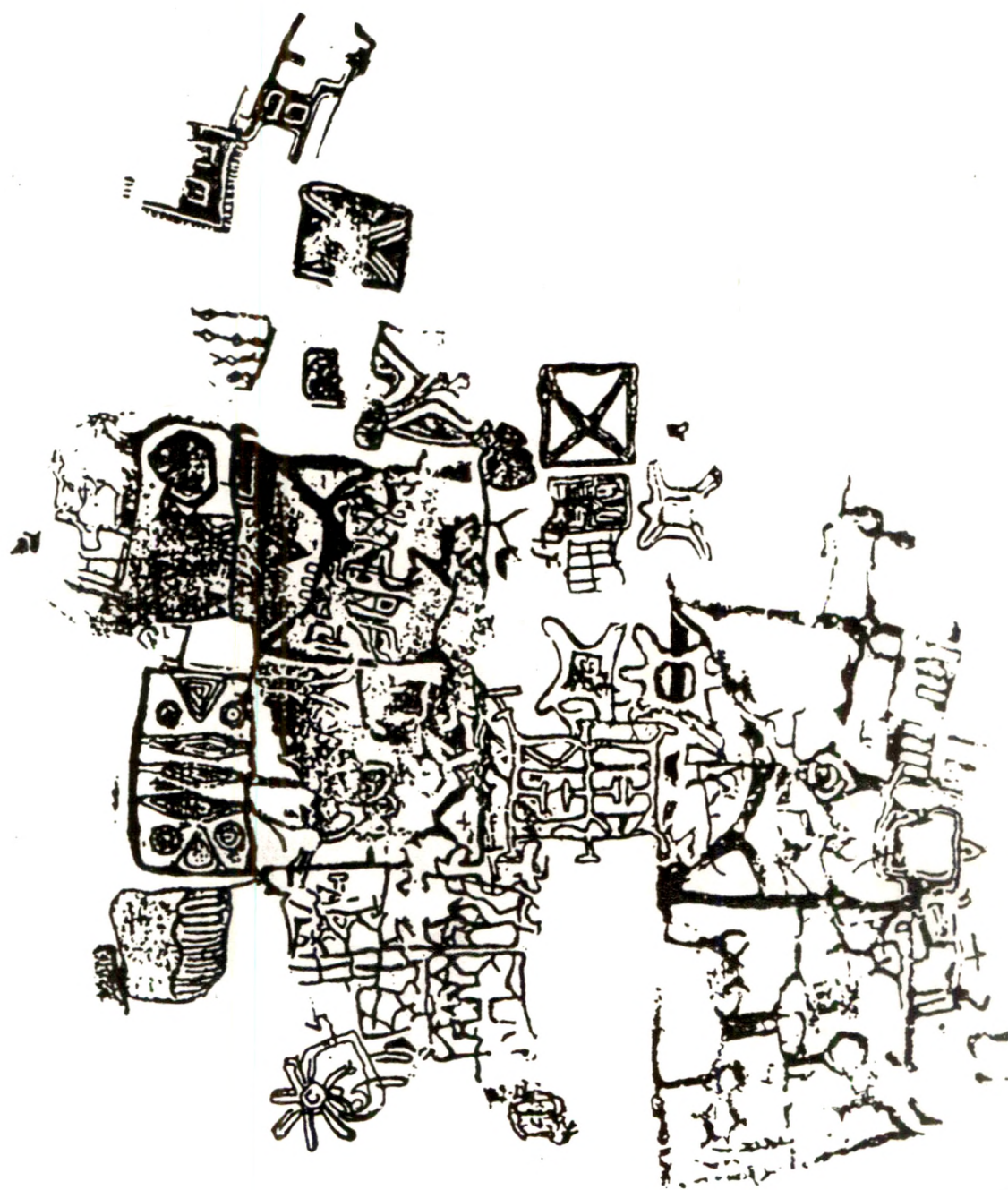
29. Panel of rock art in southern part of sector C, Isco.



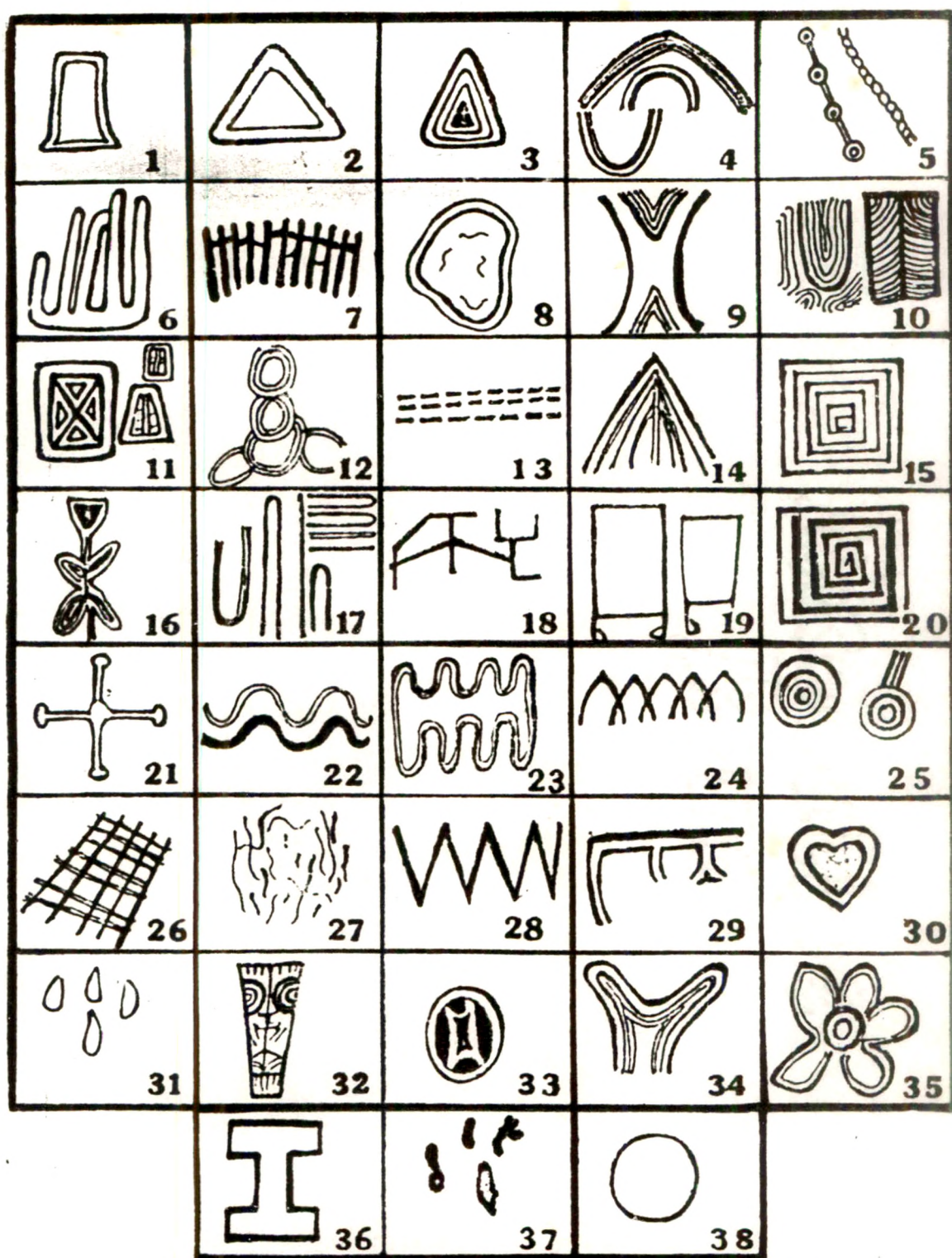
30. Panel of rock art in sector D, Isco.



31. Panel of rock art in Sector E, Isco.



32. Panel of rock art in sector F, Isco.



33. Cluster of non-figurative motifs in rock art, Isco.

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4. The figurative motif of a deer and an elephant, Jambudip, Pachmarhi.
5. The deer and the predator within a forest setting, Bainganga, Panchmarhi.
6. Hunter chasing the deer, the figure of deer is shown in X-ray painting, Mahadeo; Pachmarhi.



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7. Archer^{ay} hunting a Bovid. Hanuman mandir,
Pachmarhi.

8. Hunting of a deer. Bainganga,
Pachmarhi.

9. Elephant, painted in cream colour.
Jambudip, Pachmarhi.



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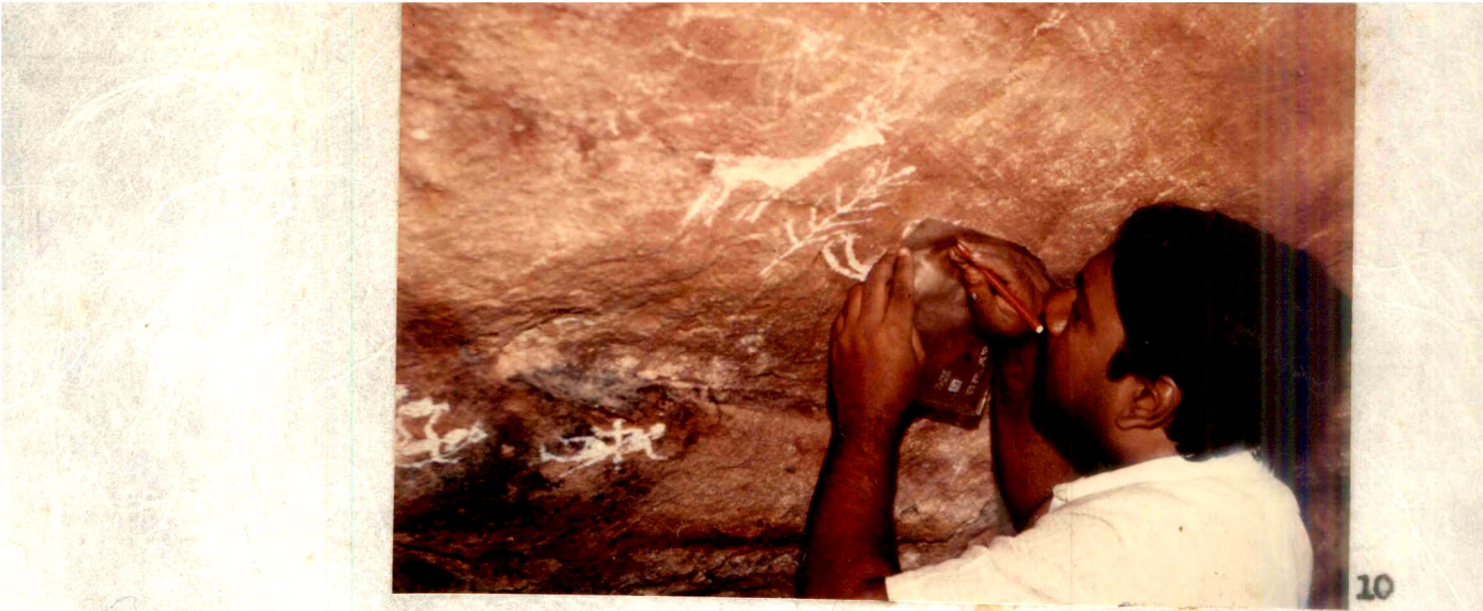


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10. The researcher examining the rock paintings at Bainganga, Pachmarhi.

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12. Scene representing group dance during festival. Dancers holding umbrella in hand, Bania Bauri, Pachmarhi.



13. Scene representing group dance.
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22. Figure of animal hunting, horse rider and other warriors. ~~Harman~~ ^{Harman} mandir, Pachmarhi.
23. Figures depicting man-animal relationship. Imli Khoh, Pachmarhi.
24. Armed man driving the cattle. Bania Bauri, Pachmarhi.
25. The X-ray figure of a pregnant cow at the centre, Bania Bauri, Pachmarhi.
26. Horse riding and animal riding warriors with a flag. Bainganga, Pachmarhi.

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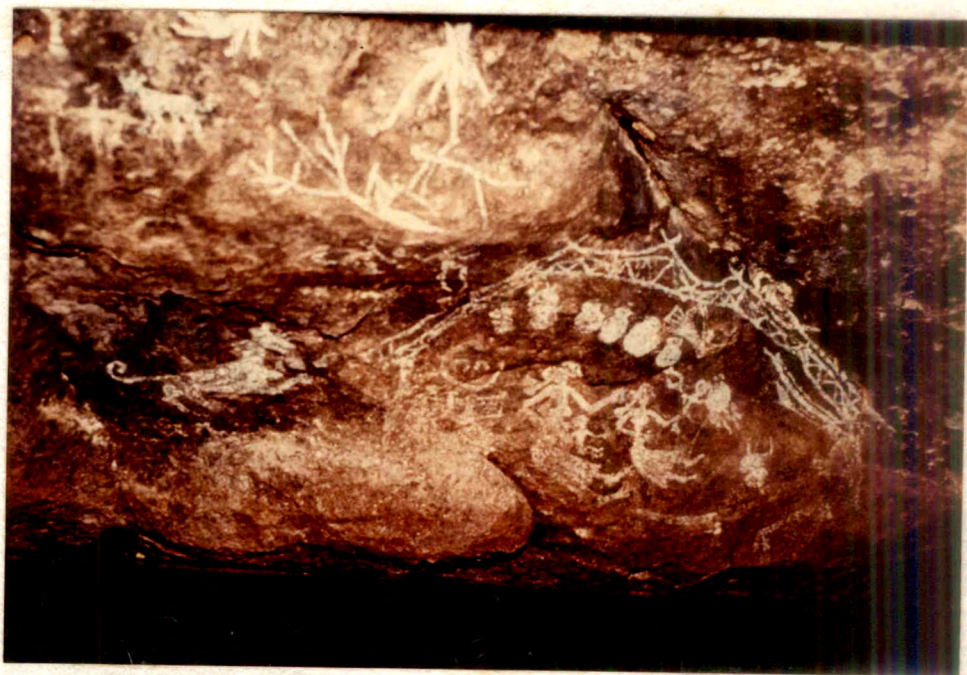


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27. Figure of a sitting male with distinctive pattern of dress and hair style holding knife in hand. The monkeys on a tree are associated to the figures of beehive and honey bees. Bania Bauri, Pachmarhi.
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29. Vultures in a battle field, waiting for carcass. Imli Khoh, Pachmarhi.



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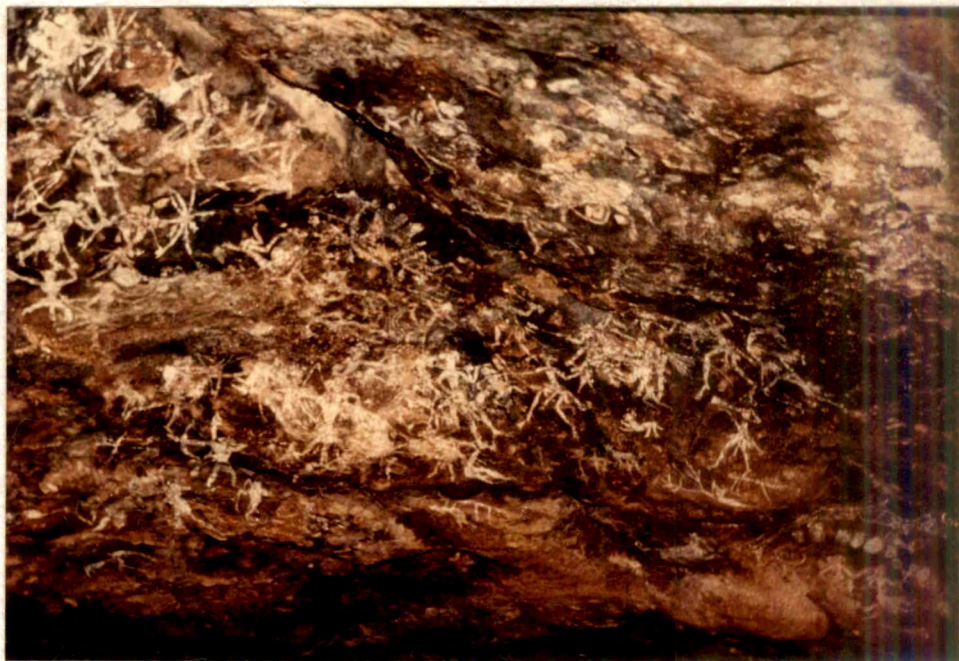
30. Scene of a battle field, Mahadeo,
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31 - 32. Battle scene and other figures.
Maradeo, Pachmarhi.

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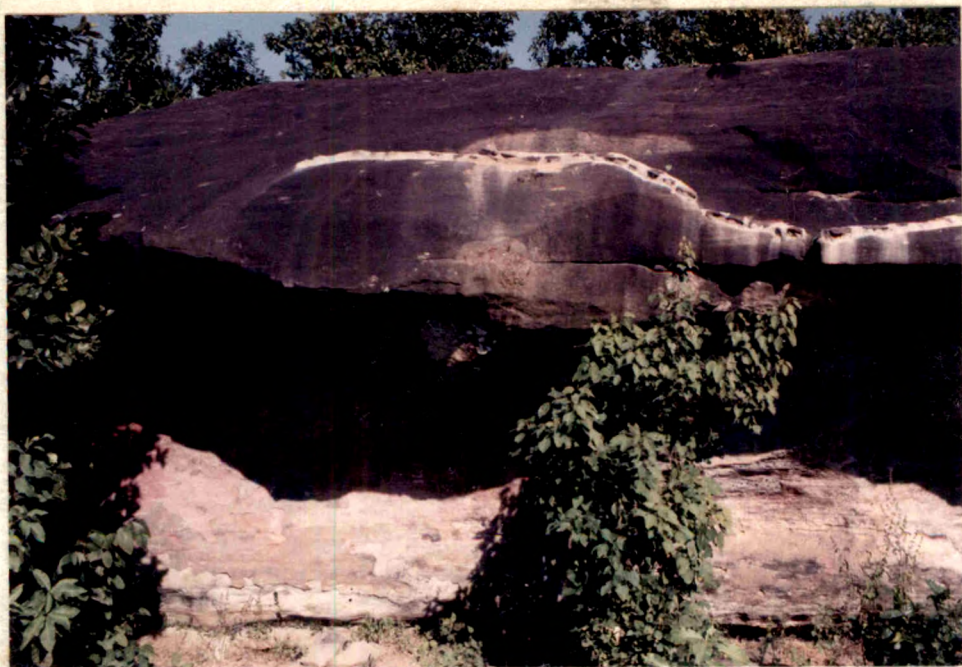


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33. Isco rock art site, District
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34 - 35. Figurative and non-figurative
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36. The painted rock shelter. Ulap,
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commemorative tablets. Pachmarhi.

45. The sacred grove of the Korku tribe
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Pachmarhi.



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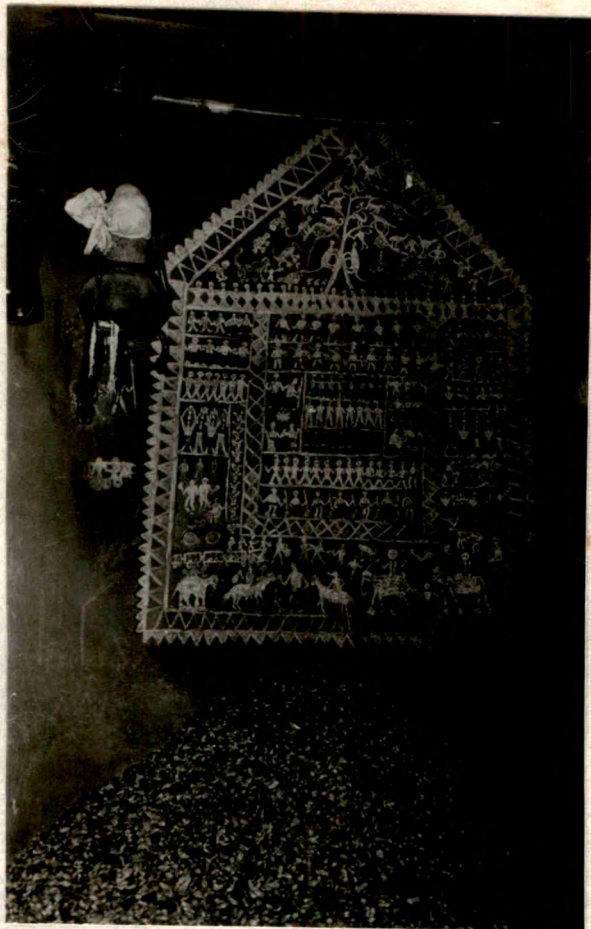
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49. The traditional motifs engraved on a door of Juang village dormitory. District Keonjhar, Orissa.



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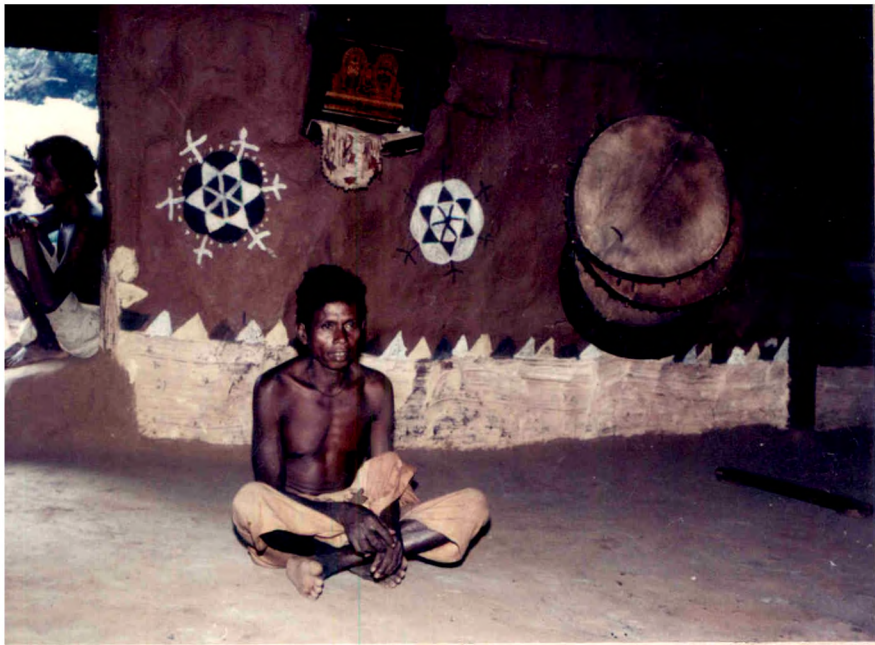


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50. Juang village dormitory. Village :
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District : Keonjhar, Orissa.
54. Carved wooden door in a Juang house.
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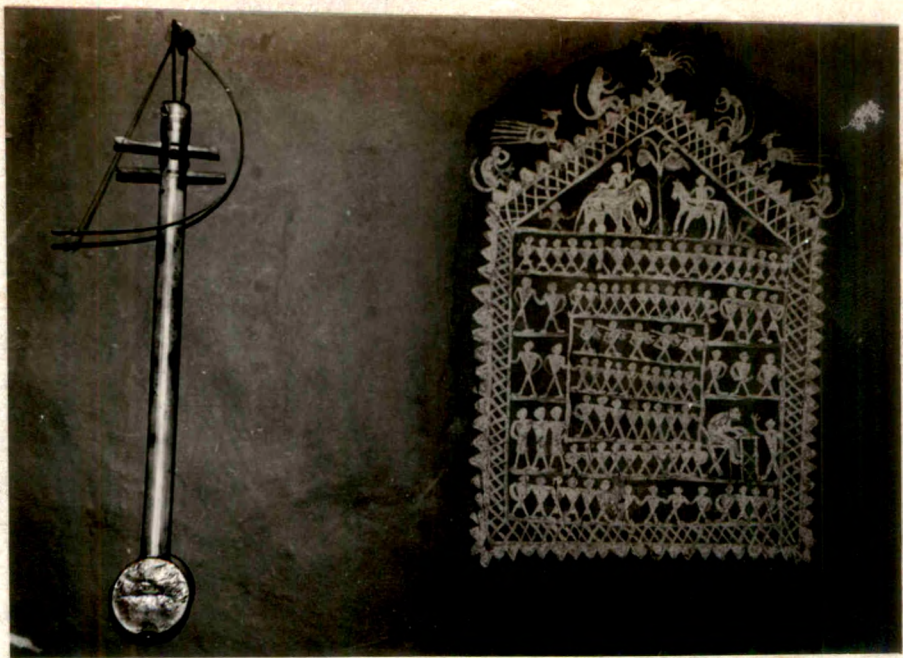


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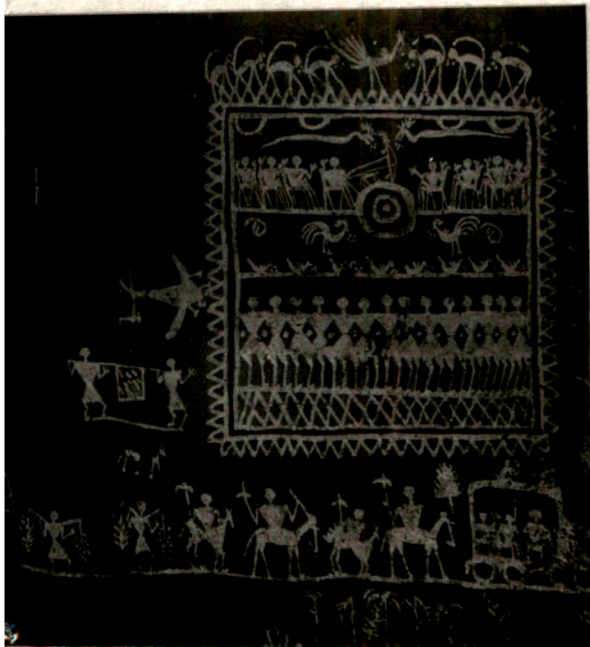


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55. Painted icon, in a Lanjia Saora village. District Koraput, Orissa.
56. Painted icon in a Lanjia Saora village. District Koraput, Orissa.
57. Painted icon in a Lanjia Saora village. District : Koraput, Orissa.
58. Painted icon in a Lanjia Saora village. District : Koraput, Orissa.



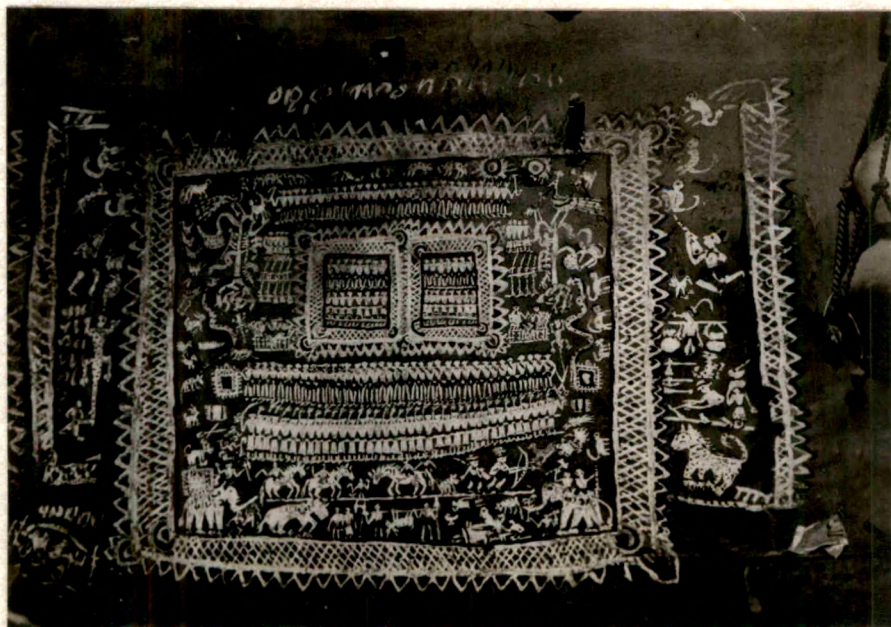
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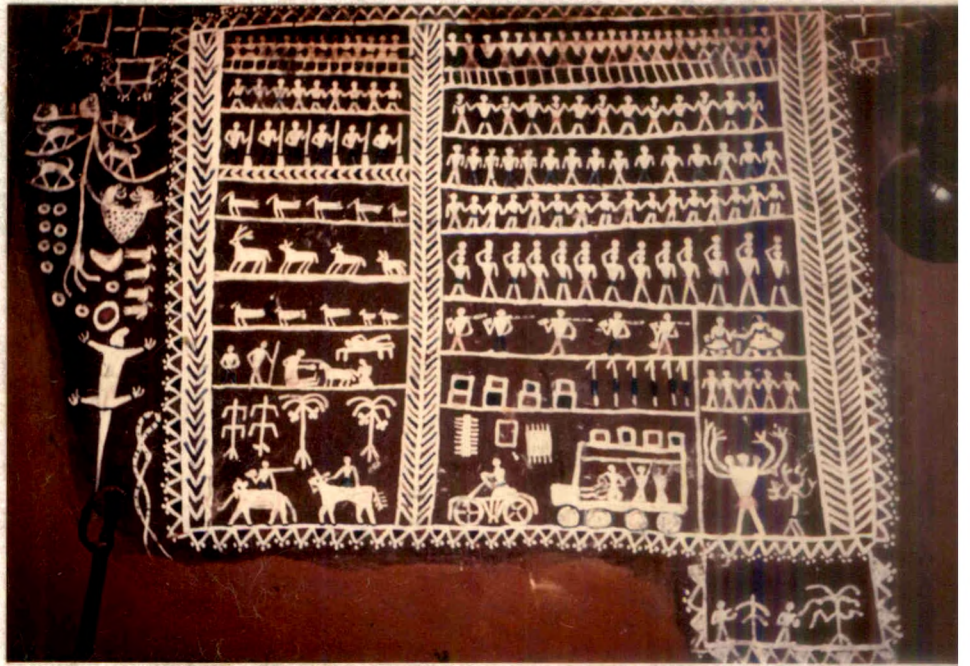
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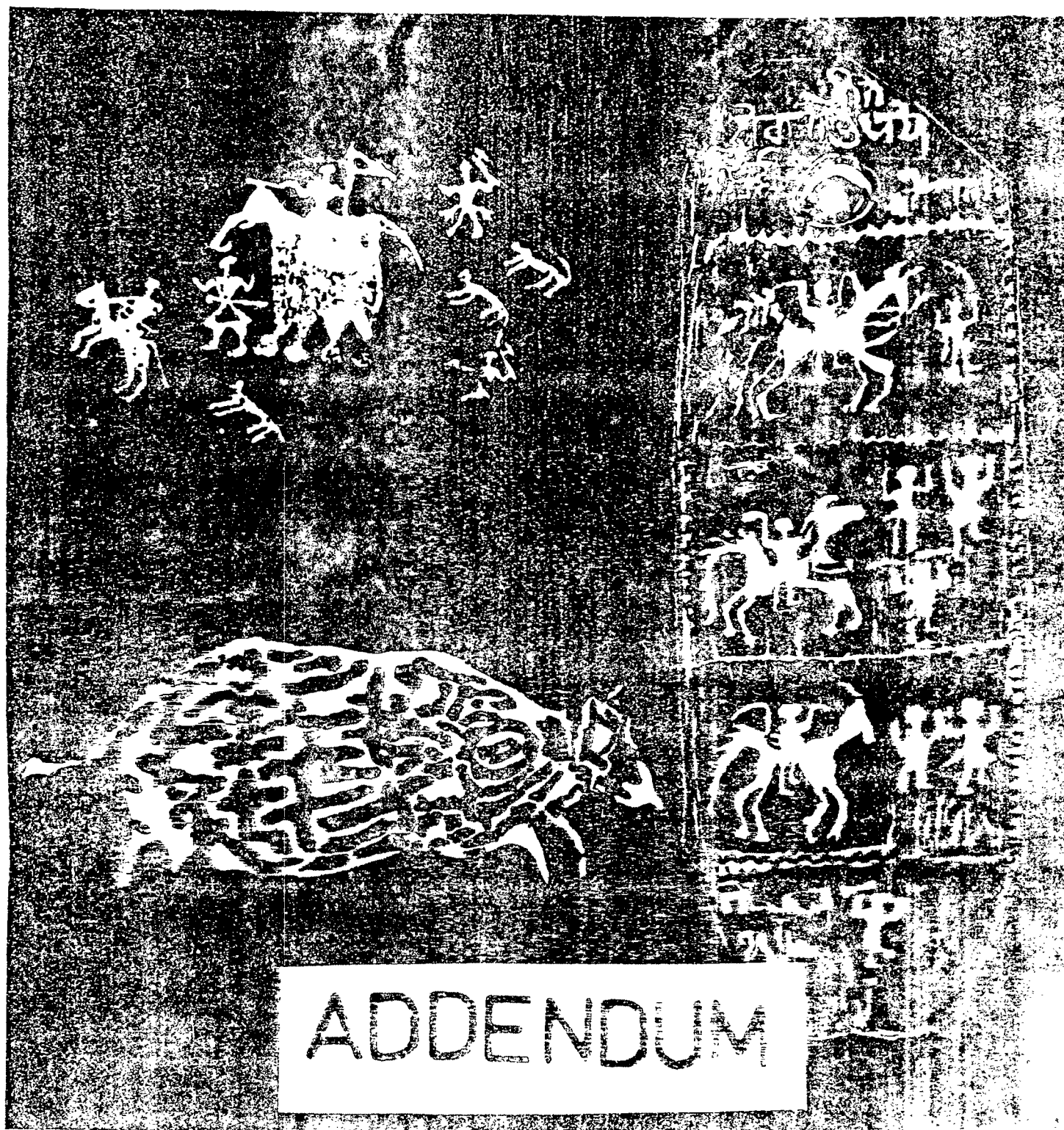


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EARLY ROCK ART AND ETHNOGRAPHY
ANALOGY IN INDIA



SOMNATH CHAKRABARTI

TITLE OF THE THESIS : EARLY ROCK ART AND ETHNOGRAPHIC
ANALOGY IN INDIA.

Addendum/corrected thesis submitted for the degree of Doctor
of Philosophy in Science (Anthropology) to the University of
Calcutta. Candidate - Somnath Chakrabarti. 13th September, 1997.

Somnath Chakrabarti

In compliance of the suggestions rendered by the Indian
examiner on this dissertation work, the distinct two areas
identified by him/her are respectively :-

1. "To classify the rock art even in a relative chronology
using various parameters to date them in a broadest sense of
cultural periodization."
2. There should be suitable "indications of figures and
plates in the text." The absence of "which hampers to the
reader unnecessary searching illustrations....".

This present undertaking is a humble attempt by the
researcher for improvement of this thesis following the
examiner's suggestion, on abovementioned "negligible
shortcomings of rectifiable nature."

Rock Art : A chrono-cultural assessment.

In any study on rock art, determination of chronology
is essential for understanding its antiquarian significance
and genesis of the particular trait of culture in the greater
perspective of bio-cultural evolution of human-kind. In this
particular research problem, the socio-cultural relevance of
art with an exhaustive study on techno-typological aspects of

early rock art and its modern ethnographic parallels were identified as focal areas. The study was based on the hypothetical concept and methodology concerning ethnographic analogy which is universally accepted by anthropologists as well as archaeologists for decipherment of primeval art and other elements of material culture. Therefore the primary aim for such close comparison between the two sets of data was to determine the common affinities. It is indicating the socio-economic profile as well as structure-organizational attributes of the society which were responsible for art activities during formative period. For understanding the societal role of art, at least dealing with this present problem of research, dating and historical details on periodic development of early art has some significance. In this present thesis discussions on various aspects of chrono-cultural periodization, particularly related to the rock art sites have already been covered (Pages : 35, 76, 105-106, 180-181, 183 and 187). The hypothesis on chrono-cultural stages of early rock art proposed by earlier workers have also been mentioned in different chapters of this thesis (Pages 57, 76, 105-106).

It may be relevant to mention that testing of Fisher's hypothesis (Fisher , 1961. Pages : 180-181) that has been corroborated in this thesis is an attempt to justify its validity in Indian situation. The experimentation with

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Fischer's model incorporating suitable data on tribal art ascertain the cultural level and social preconditions for generating rock art in a given time and space. Therefore in a more analytical approach, the chrono-cultural aspect have already been discussed in this present thesis for identifying the cultural standard of the primeval society.

Rock art study is a common area for access to the archaeologists, art - historians and anthropologists. But anthropological approaches towards rock art in general has some discrete objective and method concentrating on its socio-cultural relevance.

Whereas, the approaches by art historians and archaeologists largely concentrate on studying its genesis, evolutionary sequence, materialistic and rarely aesthetic aspects of art. Universally in the archaeological studies on prehistoric and ancient rock art, the art motifs are classified, arranged and compared with other form of archaeological evidences with a view to chrono-cultural reconstruction. The other prime aim is to trace the possible route and source for diffusion of culture. Therefore the dichotomy in the basic interest is responsible for developing different approaches in the discipline of anthropology and archaeology. The present worker being trained within the discipline of anthropology prefer to use a more dependable technique of cultural

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comparisons rather than any chronological speculation.

Neither archaeologists nor anthropologists are independently competent or self-sufficient for studying the absolute chronology of early rock art or any other evidences of prehistoric period. Such determination of absolute chronology involve a set of highly specialized scientific methods and laboratory-based techniques developed by the nuclear scientists, physicists and other experts in allied disciplines. Archaeologists and anthropologists in coordination with other branches of physical science and technicians may undertake such a project for chronological determination. But majority of existing technique and methods for absolute dating have limitations in dating the evidences of rock art, either of pictographs or petroglyphs. The organic materials embeded in the paint are the major source for identifying the actual date of the sample, Physico-Chemical contamination may affect proper dating of the rock art sample. For determination of absolute chronology from the rock art samples, the most dependable methods for analysis of pictographs is accelerator mass spectrometry or AMS dating, Organic substances applied as binding material or traces of charcoal present in the paint of prehistoric/ancient rock art are sources for dating . For dating of petroglyphs, carbonate, CR and oxalate analysis is more common. Recently the emerging application of Microerosion analysis technique

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is considered as the "only viable technique currently available that involves no damage of the art or a related feature, it requires no contact at all with the motif" (Bednarik, 1992 : 151-152).

In Indian context, direct dating of rock art specially absolute dating of prehistoric and early rock art has so far not been attempted by experts (Bednarik, 1993). For absolute dating of rock art, a multidisciplinary research team is required to form in India.

The other dependable methods for determining relative dating of rock art is to analyse the evidences proper available in proper stratigraphical context. Recently in Bhimbetka, which is the representative prehistoric rock art site in Madhya Pradesh; Bednarik (1993) have identified a large cup mark and meandering line engraved on the rock wall in a auditorium - like spacious and huge rock shelter (No.iii, F-24). The stratigraphic evidence was concealed and after detail scrutiny and verifications, Bednarik (1993) related those petroglyphs with the Acheulian period of occupation. Earlier excavations has yielded tools from the auditorium rock below the mesolithic level.

Sometimes the exfoliated part of rock ceiling or wall containing rock art is found from the stratified deposit on the rock floor. In such cases, the geological study of the deposit

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could explain the palaeoclimatic conditions and its approximate period in geological time-scale. In India, such stratified evidence of rock art is limited. Recently Bednarik have examined, some selected evidences that have so far been claimed as definite testimony for presence of Paleolithic art in India. According to him - "no pre-writing rock art anywhere in Asia has been firmly dated, and even broad cultural attribution is often most tenuous. For instance, a Palaeolithic antiquity of Indian rock paintings (Wakankar 1983) is widely rejected by Indian scholars today. Wakankar's claim for the universal superimposition precedence of the green dynamic paintings of central India has been negated by Tyagi (1988), whose findings I have been able to verify on various occasions. Having refuted the engravings on 44 ostrich eggshell fragments from Palaeolithic sites in India by demonstrating that they are natural markings, and having also determined that the Upper Palaeolithic so-called 'mother goddess' of Lohanda Nala, Belan valley (Misra 1977), is in fact a damaged bone harpoon with four symmetrically arranged barbs, I have had to reject most evidence advanced in favour of Palaeolithic art in India; solid proof is limited to the engraved ostrich eggshell specimen from Patne and a few perforated disc beads, and the Hunsgi evidence of the use of ochre crayons in the Acheulian (Bednarik 1990). However, there is a possibility

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that the first petroglyphs discovered in central India (Bednarik et al. 1991) include specimens of a Pleistocene tradition. But this proposal is in need of stringent testing. The vast corpus of Indian rock paintings is attributed mostly to the Mesolithic and Chalcolithic periods, but it must be emphasized that not a single motif is actually dated, nor does the attribution seem to be based on objective and falsifiable reasoning or evidence. In fact not a single Indian rock art site has even been properly recorded (S. Chakraverty, pers.comm.)." (Bednarik, 1992 : 144) .

The proper scientific method of dating, either absolute or geological chronology is still not attempted on rock art in India. In the last century, since the beginning of the exploration of rock art sites in India, several scholars (Gordon and Gordon, 1939-40; Gordon, 1958; Wakankar and Brooks, 1976; Neumayer, 1983; Pandey, 1993) have classified the rock art and arranged in successive periodic order on the basis of certain parameters. Till present day, there has been no significant development in analysis and periodization techniques. The major considerations for such classification for identifying successive stages of rock art tradition are : form and style, art-motifs, theme, technique of execution, dimension, colour-scheme, analysis of material culture including

type of artifacts, dress and personal adornment, hair-style, house type, cultural role of both wild and domesticated variety of animals, and above all the evidence of superimposition prevalent in the rock-canvas. It is interesting to note that in rock art sometimes the art-motif of two or even more generations are found to occur in the successive layers on the rock, one above the other. For unknown reason the existence of art made by earlier artists were never obliterated by later occupants. Rather they painted on the same rock surface which naturally resulted overlapping. From such evidence of superimposition, the rock art of different periods could be retrieved which ultimately can ascertain the changing pattern of style, technique, theme, colour-scheme and overall perception of the artists of successive periods. The technical analysis of superimposition is based on monolithic concept of cultural dynamics through successive advancement of time.

The other source for relative dating of rock art is to relate the rock art with the archaeological evidences unearthed from the same site or in close proximity. In majority of the rock art sites in Central India have yielded microlithic tools including both geometric and non-geometric types of blade-bladelet elements. In Pachmarhi, the focal area of this present study; the painted rock shelter at Dorothy Deep (Fig : 3) was systematically excavated by Hunter

(1935, 1936). The floor of the rock shelter and a cave-like tunnel inside containing thick layers of deposit have produced plenty of microliths, mostly geometric in type including triangle, crescent, drill and scraper. Three human skeletons were recovered from the lower strata of deposition of which two are of children and one adult. The successive deposit overlying it produced fragmented pateries. The skeletal remains have not properly studied and so far racial identification of them is still unknown. According to Khare (1984) the racial feature of the skeletons are almost identical to the indigenous tribal population of the area. Hunter's reports (1935, 1936) are considered as an important source for supplementing the data on rock art motifs for identifying the phases of cultural development and in indicating the group of people involved in art-practises for generations. In Pachmarhi, neither during Hunter's excavation nor thereafter any archaeological discovery of metal tools has been made. But a significant number of figurative drawings represent metal tools like sword, shield dagger and spear-head which donot confirm the available archaeological data. Beside the excavated rock shelter at Dorothy Deep, at least from ten rock art sites (77%) of Pachmarhi scattered evidences microlithis with fluted core and debitage flakes; being associated with charcoal and grey-coloured potsherds have been found by the present

worker. In majority of the sites, the lithic artifacts are available within loose sandy soil at the surface of the rock-floor deposit. Perhaps, during mesolithic settlement, the rock shelters were factory sites.

Findings of lithic tools and pottery from the Post-Pleistocene deposit indicate that at the earliest a hunting-gathering phase of culture was prevalent in this topographically almost isolated area of Pachmarhi hills. Thereafter a phase of microlithic users continued with the assemblages of grey ware. It indicates a developed or marginal phase of hunting-gathering in association of pottery-which could be an assemblage of neolithic period at the earliest. Therefore it is most probable that in Pachmarhi the hunting-gathering activity with production of lithic artifacts continued even during urbanization and thereafter. The use of basket and pottery was common to the society that they were influenced by cultural contact from external sources. The abundance of forest resources in the region surrounded by mountainous range could be a factor for prolong continuation of lithic tool technology and long presence of semi-nomadic societies.

The depicted figures of rock art to some extent corroborate the abovementioned archaeological analysis. Figurative drawings of variety of animals both wild and domesticated types, hunting by individuals and in organized effort, use of pottery etc. are conspicuous. Existence of

metal artifacts as seen in the painting have never been recovered during archaeological explorations. Further intensive archaeological exploration and excavation is urgently required in this region for a more dependable chrono-cultural reconstructions of rock art.

An analytical study on rock painting of Mahadeo hills including Pachmarhi area was brought about by Gordon (1939-1940) with the classification of the motifs by certain criteria such as style, colour-composition, subjective content and degree of freshness. On the basis of analysed data a hypothetical periodication was proposed with a framework of five series in sequential order. The result of the same was presented with the inclusion of a number of components, as distribution, broad chronology, special features etc.

Gordon and Gordon (1939-1940) had shown stylistic similarities between certain figures of warriors holding weapons as depicted in the rock art with figurines of two medieval hero-stones found in a temple of Rajasthan as also with similar painting found in galleries of Ajanta which was a Buddhist monastery. Gordon and Gordon (1940) have also mentioned about the presence of nagri form of inscriptions in at least two painted rock shelters of Mahadeo hills. Decipherment of those inscriptions have not been possible for them, yet they have estimated a date of 11th or 12th Century for those inscriptions. But later, Neumayer (1985)

refused to accept the view that any inscription was associated to paintings.

The chronology of rock art in Mahadeo hills, estimated by Gordon and Gordon (1940) is between 5th to the 10th Centuries for the majority of the paintings and from its initial phase it took about 1500 years for the ultimate development of the primeval art within 10th or 11th Century A.D. Gordon and Gordon's chronological assessment has been largely rejected by the scholars of later period (Neumayer, 1985 ; Mathpal, 1981, 1984; Pandey, 1993; Wakankar and Brooks, 1976).

It has already been mentioned in the textual part of the thesis that Sen (1949) in his critical assessment on the chronology of rock art in Pachmarhi have commented that the weathering activity is considerably rapid and active in the site. So that possibility is remote for presence of paint or binding materials on the sandstone rock for a long span of time. Thereby majority of the paintings are estimated as not older than few Centuries. Sen (1949) also refuted the idea of any possible connection between microliths found in the rock shelters and painted motifs therein.

According to Neumayer's view (1985) in its initial phase, rock art of Mahadeo hills have major resemblances with the cluster of sites in the Vindhyas. Neumayer had classified the rock art of Mahadeo hills into two major periods i.e.

Mesolithic at the earliest and then the art continued till early historic period. Neumayer's classification is based on certain parameters like theme, style, technique and aspects of material culture. In his analysis, from Mesolithic period the rock art tradition originated in the hilly region. According to his estimation, Mesolithic paintings are relatively few in number and comprise the honeycomb patterns in the category of non-figurative motif and often the same pattern is represented in body designs of men and animals. Rare presence of hunting and food gathering scenes, oversized head decorations and decorative strings around the arms and knees of both men and women are other common features. Figures of women are arranged in group-dancing scenes. Depiction of animals are mostly naturalistic, whereas the anthropomorphs are shown in slender stick figures. X-ray figures of animals are considerable in number. The predominant zoomorphs are - Deer, pig, antelope, fish and peacocks.

In the next phase, i.e. during historic period, the number of motifs are numerous. Neumayer estimated that the period dated back during first millenium after christ. The life and activities as depicted in the rock paintings of historic period are identical to the tribal societies still inhabiting in this forest-clad hilly region. The thematic account of the rock paintings culminated during this particular period are : battle-scenes, horse riding warrior or chiefs,

group of monkeys, extensive use of metal weapons in warfare including sword, shield, spear and lances. Blowing on horn and trumpets, indigenous people with bow and arrow, depictions of head-hunting scenes, household scenes indicating sexwise division of labour and use of long staircases for collection of honeycombs are some of the common variety of paintings. Neumayer had identified a great variety of paintings of historic period as illustrations of myths and legends.

The Chalcolithic period of culture which is conceptually an intermediate phase between Mesolithic and early historic period is said to be almost absent in Mahadeo region.

To Neumayer's (1985) view, the rock paintings of Mahadeo hills had originated during Mesolithic period, the date of which he estimated was c. 20,000 years B.P. and it continued until the introduction of cultivation during Chalcolithic period in the 3rd millennium B.C. Neumayer's view can not be accepted because in global situation Mesolithic culture had originated during Holocene period, later than 10,000 years B.C. Neumayer's estimated date of 20,000 years B.P. is a very early date for development of Mesolithic culture in any part of the world. Neumayer's observation on presence of a tribal community in the historic past is obvious. The life and activities of tribal community was delineated in the rock art.

The data on rock art motif available in three rock art areas, namely Pachmarhi, Isco and Ulap have already been incorporated and classified (Page : 92-106, 110-117, 121-126) and the major parameters for such classification followed by rigorous analysis were : form, morphic types, motif, style, technique involved, dimension, theme, colour-scheme, superimposition frequency of identified types of animals, human activities and material culture including artifacts, dress and ornaments, shelter etc. An assortment of principal types of non-figurative motifs, signs and symbols all were metriculously accomplished in this present undertaking.

To the Indian archaeologists, superimposition of motifs is considered as the prime sources for hypothetical synchronic arrangement of rock art illustrating the developmental stages. Wakankar and Brooks (1976) had proposed a stylistic development in rock art of India on the basis of their assessment on the data of superimposition. Wakankar and Brooks studied examples of rock art from different sites mainly of Madhya Pradesh, Uttar Pradesh and Rajasthan. Their hypothesis represent twenty successive stylistic stages including four distinct periods namely - Mesolithic at the introductory level and thereafter overlaid by Period II comprising Neolithic/Chalcolithic and early Iron Age. Period III represent early historic (300 B.C.E. - 100 C.E.) phase and the final phase is of historic period starting from 1300 C.E. to present.

This model for development of rock art in India largely differs from this present study because such wide range of factual evidence concerning superimposition is never found in actual field situation. Bednarik's view (1995) in contradicting stylistic dating of rock art is perhaps justified - "for many decades now, such rock art has been placed into the stylistic pigeonholes created by inductive dating information, location, superimposition, inferred relationships, and speculation" (Bednarik, 1995 ; 91).

To avoid mere speculation, as well as to elevate this area of research, an anthropological insight to analyse the rock art may be more appropriate during developing-phase of rock art research in India. The cultural periodization, being based on thematic analyses of rock art is more justified which ultimately represent the developmental stages of the society and cultural precondition of the community that generated this practising art tradition.

In Pachmarhi, the focal area of this study, only 5.94% of the total motifs are related to the incidence of superimposition. It is revealed from the scrutiny on the overlapping figures - both of earlier and later layers that not much significant stylistic and thematic change is observed, excepting a particular incidence of association. As prevalent in five rock art sites, the underlying figures are mostly large with depictions of quadruped mammals; painted in different shades of red. In all cases such large figures of

wild animals are indistinct due to weathering action and seems to be produced much earlier (during initial phase) when majority of others are moderately fresh in state. The body of the large mammals are either completely covered with colour or filled with linear markings forming a design. The figures does not include any domesticated variety. Such motifs are superimposed by human figures in activity, painted in white. It largely represent battle scenes and individual human figures in activities and in association of artifacts. The cultural aspects as depicted in the rock art is closely similar to indogenous tribal communities of Mahadeo hills.

On the basis of detail observation and further analyses and classifications depending on a set of parameters a comprehensive chrono-cultural framework may be suggested.

The archaeological discovery of microlithic tools and large number of figurative drawing of game-animals together with hunting scenes suggest that in the initial level a hunting-food collecting stage prevailed there which may be Mesolithic period at the earliest. In global situation Mesolithic culture developed in post-Pleistocene era, later than 10,000 years, B.C. and in India even during 2500 B.C. Mesolithic settlements existed when urban centres have already emerged. Probably in a secluded geo-cultural area like Mahadeo hills, the Mesolithic culture with distinctive microlithic

tool tradition continued to exist thereafter with minimum cultural changes. Perhaps the distinctive topographic area with an enormous potentiality of forest resources was the prime factor for maintenance of the hunting-gathering tradition until recent historical period.

Neolithic period is reckoned for beginning of cultivation animal farming and emergence and primary village settlement which is not well-represented in the rock art. The archaeological evidence for presence of pottery in the same level of microlithic tools (Hunter, 1936) testify its later date. As evident in the Dorothy Deep excavation, the earlier geological strata contain pre-pottery microlithic tools whereas its successive overlapping strata include microliths with pottery. The pre-pottery microlithic stage represent Mesolithic culture whereas the next stage containing microliths with pottery could be identified as a developed form of Neolithic or a part of Chalcolithic cultural-complex. Chalcolithic culture largely represent a prevalent metal technology with continuation of stone-age artifacts.

In this later phase, the pictorial theme largely represent a society using metal artifacts but marginal hunting-gathering and domestication of animals continued side by side. Pictorial evidences do not support any direct agricultural activities or use of domesticates in cultivation.

The use of metal artifacts is mostly common in battle-scenes, in depiction of archer, horse-riding and elephant-riding armed warriors. Therefore majority of figures belong to this phase may be dated as between Chalcolithic to Early Historic period. During this phase, the rock artists had experienced an invasion of technologically superior alien community that they have confronted with limited variety of weapons.

The rock art of Pachmarhi is not a work of contemporary tribals. In tribal art, representation of fire-arms is not rare. Whereas such lethal weapons are never delineated in the rock art. Secondly, the tribal communities living in the area do not consider the rock art as the work of their ancestors. The figures of sun and the moon that the tribals consider as their supreme-deity and indispensable form in their art activities is completely absent in the rock art.

The analysed data of rock art sites both from Orissa and Bihar portray a preponderance of non-figurative motifs whereas the figures of human and animal forms are rare. Pictorial mention of any object of material culture is the least. Overall, the predominating signs and symbols and repetitive use of those elements signify a more developed pictographic quality of art, suitable for better communication. The rock art of Pachmarhi is more a general visual narrative in combination

of figurative motif-elements. Thus it is logical to interpret that the rock art of Ulap and Isco is more codified and standardized in nature. Availability of metal slag-mounds, and megalithic burials near Isco site confirm that the rock art evolved during Chalcolithic period or successive cultural periods. In both rock art areas the engraving and painting activities were limited to a particular cultural period as evident in the restricted number of motifs. The engravings present in both sites show precision in workmanship indicating the use of sharp metal tools. In most cases, the paintings overlap the engraved motifs. Therefore it is logical to date them as of Chalcolithic period at the earliest.

It may be inferred from the analysis of rock art motifs following Fisher's (1961) hypothesis, that the rock art of Pachmarhi is a product of a more egalitarian society. Whereas in Ulap and Isco sites, some elements of developed form indicating a more hierarchical society are found to exist. As reveals from the analysis, the functional implication of rock art was more area-specific. Unlike naturalistic visual narratives of Pachmarhi, in rock art sites of Eastern India a more abstract and symbolic art forms had emerged in relatively later period.

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As suggested by the Indian examiner in his report, the relevant "indications of figures and plates" has been included in the text. The descriptive account of all tables, figures, plates and photographs were already present in the main body of the thesis when submitted (page X to XXI and annexures from page 213 onwards).

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Abbreviations : P = Page

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